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Trade and Uneven Development: Opportunities and Challenges



Globalisation and the post MFA environment: The Competitive Dynamics and Policy Responsiveness of the Clothing Industry in Madagascar.

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Globalisation and the post MFA environment: The Competitive Dynamics and Policy Responsiveness of the Clothing Industry in Madagascar¹.

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Introduction

The last few years have witnessed two major shifts in global trading and industrialisation patterns. The first is the rise of China (with the South East Asian region in tow) as the dominant force reshaping the relations between developing and developed countries as well as the competitive dynamics within the developing world. One can no longer speak of a developing world as if it was not highly differentiated and contradictory. The second, of major significance only in respect of Africa, is most exemplified in the rapid rise of a clothing industry sector in selected countries (amongst which Madagascar has been prominent) in Sub-Saharan Africa, primarily through the impact of the African Growth and Opportunities Act. Whilst perhaps of insignificance on a global scale, the possibilities it has opened up for wage employment and rising income for significant numbers of workers on the continent is not to be dismissed. However, the end of the Multi-Fibre Agreement and the massive impact of China on the global dispersion of clothing production, threatens to substantially disrupt these processes. It is to this end that we undertook a study of the dynamics operative in the Madagascar clothing industry.

Globalisation of the textiles and clothing value chains

Globalisation in this new era is the global coordination of manufactured components into other components finally ending up as final products (Dicken 1998). Throughout the developed and developing world, firms tend to sell less and less into the perfectly competitive markets of economic theory, and more and more into the global value chains which are regulated by predominantly external global firms (Kaplinsky 2005). These global clothing and textiles sectors, *par excellence* demonstrate these characteristics as ‘networks of production, distribution and marketing of particular products or groups of products’ (Gibbon 2003b: 1811). In 2003, global clothing and textiles exports were valued at \$395 billion, making it one of the world’s most traded manufactured products. Even more significantly, exports have increased at a compounded annual rate of 6.6% between 1990 and 2003.

The textile and clothing value chain is particularly suited to global production networks as most products can be exported at each stage of the chain, making the sector highly trade intensive and sensitive to a country’s trade regime. Furthermore, a large portion of clothing production, in particular, is labour-intensive, requires low skill levels, has low barriers to entry and has been the source of rapid export-led industrialisation in a number of countries (Gereffi and Memedovic 2003). Generally, more complex, higher value-added tasks remain in developed countries with higher paid skilled labour, while less skilled tasks have moved to low-cost locations mainly in the developing world. In contrast, textiles production is far more capital-intensive and therefore developing countries have encountered difficulties in creating backward linkages in the textiles supply chain.

The textile and clothing value chain is dominated by large retailers, branded manufacturers and marketers who control global production networks and stipulate supply specifications. These retailers are able to wield a significant amount of power over manufacturers in terms of price, quality, lead times and raw material inputs. Information flows directly from retailers to clothing manufacturers, but also to textile plants in many cases, where decisions are made on patterns, colours and material. Furthermore the commercial buyers in these global clothing value chains are exceptionally demanding, and it is notable how they are insisting on lower prices, better quality, shorter lead times, smaller minimum quantities and supplier acceptance of as much risk as possible (Flanagan 2003; Kaplinsky 2005).

The power yielded by these retailers is attributed to two main factors. First, consumers no longer demand standardised products but instead increased variety of product choice leading to shorter

product seasons, more rapid product cycle turnover and smaller minimum orders (Salinger *et al*, 1999). Furthermore, consumers are becoming more demanding in terms of price; spending smaller proportions of income on clothing but shopping more frequently and buying a larger number of clothing items (Nordas, 2004). The demands of consumers coupled with globalisation have led to retailers sourcing production from manufacturers in the lowest cost locations in developing economies. These manufacturers either have to absorb the costs and lower their margins, or improve productivity. Second, merges and acquisitions have led to a greater concentration of retailers in developed economies providing them with the ability to increasingly manage the global supply network. By 2001, the top five retailers in the US accounted for 76% of sales among the top 20 retailers (Weathers, 2003). Walmart is the single largest retailer representing 20% of total US demand in the retail sector (Frontline, 2004). The UK clothing retail sector is similarly concentrated. According to Gibbon (2001), the top five retailers accounted for 32% of total clothing sales in 2000, while the top 10 accounted for approximately 42%. It is predicted that by 2010 the top 10 retailers will control 25 – 30% of world textile and clothing trade (Comesa, 2003).

For the last quarter of the 20th Century global trade and production in this sector was regulated by the Multi-Fibre Agreement (MFA), ratifying countries' rights to impose quotas on textiles and clothing imports. This allowed rich countries time to restructure their textiles and clothing industries before opening up to competition from poorer countries. Furthermore each of the large importing blocs negotiated separate bilateral arrangements with developing countries to set up complex tariff schedules protecting the more capital-intensive parts of the chain, and reducing tariffs on labour-intensive stages in the production cycle. The aim was to allow their domestic producers to take advantage of outsourced cheap labour for the unskilled labour-intensive part of the production cycle (Kaplinsky 2005).

The consequences were diverse. Firstly, quota based preferential trade access meant that production spread to an ever-increasing number of countries. Secondly, to counter quota limits key manufacturers organised garment production in under-utilised quota producer countries. Thus, during the 1990s, a rapid process of third party organising and supply sourcing functions spread throughout the developing world to provide access to established markets. Hong Kong garment producers opened factories in Mauritius and elsewhere, and Korean and Taiwanese producers spread their operations to the Caribbean and to sub-Saharan Africa. In turn, as they matured in their operations and established their own footholds, Mauritian garment producers also spread their operations to Madagascar. Finally, the Asian producers, especially in Hong Kong and Taiwan developed the capacity to mobilise and coordinate full-package manufacture (i.e. all the manufacturing stages) in the global textile and clothing value chain leading to what Gereffi (1999) termed "triangular production networks". In other words, production in one country (usually less developed) organised and coordinated by firms in another (mostly middle income) country, with products produced sold on to final buyers in yet a third (usually industrialised) economy.

The liberalisation of clothing and textiles has been controversial because the sectors make a substantial contribution to employment in both developed and developing countries. However, manufacturing in most developed countries has severely contracted and changed its focus. Currently, the US, EU and Japan are the largest consumers of textiles and clothing, yet the majority of clothing and textiles in these countries is imported. The Japan Textile Importers Association estimates that 87% of clothes on sale in Japan are imported, while between 1995 and 2002, the US share of world imports of textiles and clothing increased from 14% to 21% (Flanagan, 2003). Although there is almost no clothing industry left in the US or Japan, a

sizable clothing industry remains in the EU, especially Southern Europe - 100,000 firms employing 2.5 million people with a turnover of US\$229 billion.

China (Table 1) is substantially the world's largest clothing exporter, increasing the value of its clothing exports by 438% from \$9.7 billion in 1990 to \$52.0 billion in 2003. In 1990, China represented only 9% of the world's total clothing exports, but by 2003, its share had increased to 23%, and if Hong Kong with 10% of the world total is included, China effectively accounted for one third of world clothing exports. Although Italy grew clothing exports by 37% (1990 – 2003), its share of world exports declined from 11% to only 7%. Mexico and India are the only other countries among the top 10 exporters that have been able to increase their world share. India's clothing exports grew by 155% (from \$2.5 billion to \$6.5 billion) 1990 - 2003, increasing its share of world total exports from 2% to 3%. China also features prominently with regard to the importation of clothing into the EU - imports from China of HS 61 total 36,722 billion Euros in 2003 – a 1,200% increase since 1999.

The textiles sector is traditionally far more capital-intensive, with long lead times, resulting in large minimum quantities and less flexibility (Nordas, 2004). Given the commodity type nature of much of the fabric produced for clothing manufacturers, textiles firms in industrialised economies are increasingly producing household and industrial textiles which is more technical and R&D intensive sector, subject to less frequent stylistic changes and higher value-added production. This, coupled with the capital-intensity of textiles production has meant that it has been more difficult to relocate textiles production to developing economies, and most of the relocation that has taken place has been concentrated in the areas of clothing fabric and less in areas of household and industrial textiles (Nordas, 2004).

China (with 16% of the world total) is the world's largest exporter of textiles products. Its textiles exports increased from \$7.2 billion in 1990 to \$26.9 billion in 2003 (273%), while its share of the world total more than doubled. Hong Kong and Italy each accounted for approximately 8% of total textile exports, exporting \$13.1 billion and \$13.6 billion respectively in 2003. China holds the greatest share of US imports (17%), with imports more than doubling since 1997 to reach \$10,997 billion in 2003.

Table 1: World trade in clothing by top 10 countries (US\$ million)

Country	Exports								1990-2003 % change	% world total	
	1980	1985	1990	1995	2000	2001	2002	2003		1990	2003
China	1,625	2,450	9,669	24,049	36,071	36,650	41,302	52,061	438%	9%	23%
Hong Kong	4,976	6,718	15,406	21,297	24,214	23,446	22,343	23,152	50%	14%	10%
Italy	4,584	5,320	11,839	14,424	13,384	14,220	14,643	16,191	37%	11%	7%
Turkey	131	1,208	3,331	6,119	6,533	6,661	8,057	9,937	198%	3%	4%
Germany	2,882		7,882	7,530	7,320	7,444	8,338	9,749	24%	7%	4%
Mexico	2		587	2,731	8,631	8,012	7,751	7,343	1151%	1%	3%
France	2,294	1,935	4,671	5,659	5,414	5,469	5,882	6,935	48%	4%	3%
India	673	930	2,530	4,110	6,179	5,484	6,037	6,459	155%	2%	3%
United States	1,263	785	2,565	6,651	8,629	7,012	6,032	5,537	116%	2%	2%
Belgium					3,941	4,206	4,649	5,353		0%	2%
World	40,590		108,129	158,353	197,498	194,490	202,310	225,940	109%	100%	100%

Imports											
United States	6,943	16,202	26,977	41,367	67,115	66,391	66,731	71,277	164%	24%	30%
Germany	8,326		20,411	24,550	20,183	19,330	19,647	22,219	9%	18%	9%
Japan	1,537	2,012	8,737	18,758	19,709	19,186	17,602	19,485	123%	8%	8%
UK	2,858	2,694	6,961	8,002	12,995	13,169	14,657	16,551	138%	6%	7%
Hong Kong	695	1,671	6,913	12,654	16,008	16,098	15,640	15,946	131%	6%	7%
France	2,637	2,707	8,381	10,639	11,412	11,769	12,402	14,771	76%	7%	6%
Italy	797	779	2,580	4,703	6,139	6,697	7,576	9,342	262%	2%	4%
Spain	152	121	1,649	2,492	3,847	4,279	4,965	6,559	298%	1%	3%
Belgium					4,828	5,013	5,272	6,249		0%	3%
Netherlands	2,875	2,045	4,768	5,132	5,371	5,220	5,250	5,943	25%	4%	3%
World	42,271	50,822	112,236	162,871	207,093	203,820	211,765	236,035	110%	100%	100%

Source: DTI / WTO

Table 2: World trade in textiles by top 10 countries (US\$ million)

Country	Exports								1990-2003 % change	% world total	
	1980	1985	1990	1995	2000	2001	2002	2003		1990	2003
China	2,540	3,680	7,219	13,918	16,135	16,826	20,563	26,901	273%	7%	16%
Italy	4,158	4,727	9,492	12,877	12,040	12,165	12,131	13,569	43%	9%	8%
Hong Kong	1,771	3,038	8,213	13,815	13,442	12,214	12,374	13,085	59%	8%	8%
Germany	6,296		14,033	14,385	10,851	10,547	10,873	12,014	-14%	13%	7%
United States	3,757	2,541	5,039	7,372	10,961	10,491	10,698	10,917	117%	5%	6%
S. Korea	2,209	2,534	6,076	12,313	12,711	10,941	10,713	10,122	67%	6%	6%
Taipei	1,771	2,490	6,128	11,882	11,896	9,905	9,532	9,321	52%	6%	6%
France	3,432	2,885	6,058	7,474	6,664	6,278	6,389	7,078	17%	6%	4%
Belgium					6,311	6,079	6,244	6,960		0%	4%
India	1,306	1,054	2,180	4,358	5,998	5,375	6,028	6,510	199%	2%	4%
World	54,990		104,354	152,319	154,366	146,866	152,758	169,422	62%	100%	100%
Imports											
United States	2,543	4,978	6,730	10,441	16,008	15,429	17,002	18,289	172%	6%	10%
China	1,100	2,040	5,292	10,914	12,832	12,573	13,060	14,218	169%	5%	8%
Hong Kong	2,967	4,281	10,182	16,859	13,717	12,177	12,019	12,929	27%	9%	7%
Germany	6,871		11,868	12,477	10,007	9,528	9,244	10,292	-13%	11%	6%
France	4,119	3,484	7,595	7,526	6,751	6,336	6,236	7,001	-8%	7%	4%
UK	3,560	3,869	7,018	7,262	6,889	6,452	6,489	6,894	-2%	7%	4%
Italy	2,618	2,524	6,133	6,461	6,210	6,067	6,077	6,733	10%	6%	4%
Mexico	133		992	1,768	5,824	5,385	5,573	5,461	451%	1%	3%
Japan	1,663	1,901	4,106	5,985	4,939	4,756	4,536	5,035	23%	4%	3%
Spain	354	314	2,050	2,647	3,359	3,302	3,460	4,137	102%	2%	2%
World	56,975	55,618	107,839	156,515	163,121	155,718	161,015	179,011	66%	100%	100%

Source: DTI / WTO

The end of the MFA, AGOA and SSA

In 1994 the GATT signatories signed the Agreement on Textiles and Clothing (ATC) committing to phasing out the MFA. On December 31, 2004 the MFA came to an end and with it the termination of all quotas on textiles and clothing trade between member states of the WTO. The greatest beneficiary has been China. Its clothing exports have already increased to approximately a quarter of the world total since it joined the WTO in 2001 (de Jonquieres 2004). The US International Trade Commission (2004) concluded that China has a major competitive advantage derived from a combination of low wages and high productivity, and the production of high-quality and low-cost inputs. China is regarded “among the best in making most garments and made-up textile articles at any quality or price level” (pg xiii). Hence it is “expected to

become the 'supplier of choice' for most U.S. importers (the large apparel companies and retailers) because of its ability to make almost any type of textile and apparel product at any quality level at a competitive price" (pg xi). It is no surprise therefore that Asian prices are declining, while exports are growing (Kaplinsky 2005).

At the end of January 2005, the Chinese government released trade figures indicating that Chinese imports into the United States had jumped about 75 percent. Textiles and clothing imports from China rose from \$702 million in Jan 2004 to more than \$1.2 billion. In terms of product volume, imports of major clothing products from China jumped 546 percent. As an example in January 2004 China exported 941,000 cotton knit shirts under quota, whereas in January 2005, it shipped 18.2 million, a 1,836 percent increase. Similarly imports of cotton knit trousers were up 1,332 percent year on year. Given that China ships a large part of its goods through Hong Kong, which would not be reflected in these figures, the real impact may well be understated. (Barboza and Becker 2005)

Taking data for the first two months of 2005, the trend continued. The impact is very product specific, with cotton products showing the highest percentage increases. Cotton knit shirts and trousers exports to the US were up 2,120 per cent and 1,398 per cent, with nearly 47 million cotton trousers shipped, up from 9 million in Jan-Feb 2004. Chinese customs data shows similar massive jumps of exports to the European Union in the first two months of 2005 with clothing product exports up 82 per cent to more than \$1.8 billion, whilst textile exports jumped over 56 percent to nearly \$843 million. (Flanagan 2005). China's April 2005 export data, shows that the volume of clothing exports to the EU and US in April had grown faster (148 per cent) than in the first three months of the year (120 per cent) – and were accelerating to the EU marginally faster than to the US (Flanagan 2005).

What about the impact on the rest of the developing world's access to the major markets of the US and EU? As Kaplinsky (2005) points out the divisive impact of this period of globalization on the developing world has profoundly changed. The previous period of export-growth by developing countries which so benefited the rise of the NICs was primarily at the cost of domestic producers in the high-income economies being squeezed out of their domestic markets. Consequently they could all simultaneously increase their exports to the US and Europe, and it was a positive-sum game for these developing countries. But in this current period the growth of exports from one or a few developing countries will likely be at the cost of other exporters in the developing world. In short a zero-sum game.

What about the effect of the globalization of Chinese exports of clothing and the end of the quota regime on Sub Saharan Africa (SSA)? Our focus here is not on Chinese imports, but instead on the China's impact on the rapid growth of SSA exports of clothing.

AGOA is a US program that offers duty-free benefits to specified product lines originally from Oct 2000 to Sep 2008. In July 2004, the AGOA Acceleration Act extended benefits until 2015, and extended the third country fabric provision (originally set to expire in 2004) until September 2007. This extension introduces an added measure of predictability and credibility to AGOA and is intended to provide business with greater confidence to invest in Africa. These changes may also mitigate somewhat against the effects of the ATC, providing producers in Africa with a better chance of competing with low-cost producers based in the Far East.

AGOA's rules of origin stipulate that clothing has to be made from US fabric, yarn and thread, or from fabric, yarn and thread that is produced in AGOA-beneficiary SSA countries. However, a special rule applies to LDCs (defined as countries that have a GNP per capital of less than

\$1,500 in 1998) that allows these countries duty-free access for clothing made from fabric originating anywhere in the world until September 2007. All AGOA-beneficiary SSA countries except South Africa qualify for this rule. Therefore, while clothing exports to the US from South Africa require a triple-stage transformation (i.e. yarn to fabric to clothing) in order to qualify for AGOA, all the other eligible countries are only subject to a single-stage transformation (i.e. only the garment has to be made locally - imported fabric can be used).

In 2001 SSA countries accounted for less than 1% of global exports of clothing and textiles. But AGOA has had a profound effect on the garment industries in SSA. Many smaller, higher cost, less developed countries in SSA have been provided with valuable opportunities as they have been shielded from open competition (Minor et al 2002), and SSA has therefore been expanding its clothing exports. Exports from the region are mainly low-price basic items such as trousers, T-Shirts and sweaters that typically have long production runs, low labour content and few styling changes (US International Trade Commission 2004; Economic Intelligence Unit 2004). The production and export of clothing and textiles is concentrated in a small number of SSA countries - Kenya, Lesotho, Mauritius, Madagascar, Swaziland and South Africa, accounting for about 90% of African clothing exports (Gibbon 2002, 2003a). In comparative terms, the largest SSA suppliers' exports were worth US\$ 3 billion – miniscule compared to the US's \$453 billion imports from China (Gibbon 2002).

As Table 3 shows, Lesotho is the largest SSA exporter of clothing to the US, US\$455.9 million in 2004. Mauritius has traditionally been the second largest exporter but in 2004 was overtaken by Madagascar. As a direct result of AGOA Madagascar's clothing exports to the US exploded in 2004, jumping from US\$195.9 million to US\$323.3 million. Due to the impact of AGOA, both Kenya and Swaziland have doubled their clothing exports to the US in the past couple of years, with these now becoming substantial exporters of clothing from SSA. These countries (plus South Africa which now trails substantially behind) collectively make up the vast bulk of exports from SSA to the US. In respect of SSA exports to the European Union, in 2003 Mauritius was by far the largest African exporter of clothing to the EU (US\$642 million), followed by Madagascar (US\$146 million). In other words Madagascar is a key player in respect of SSA clothing exports to both the US and the EU markets.

Table 3: Clothing exports from Africa to the US and EU (US\$m)

	Kenya		Lesotho		Madagascar		Mauritius		South Africa		Swaziland	
	US	EU	US	EU	US	EU	US	EU	US	EU	US	EU
1990	2.5	2.5	24.5	5.6	0.4	10.8	121.2	522.7	0.0	32.3	3.4	
1991	4.5	6.3	27.0	18.2	0.1	15.1	97.7	536.5	0.7	72.7	5.2	
1992	7.8	17.4	50.8	18.3	0.2	18.5	113.1	533.9	2.4	73.2	7.1	
1993	22.1	10.3	55.1	14.7	1.5	46.3	161.2	501	12.7	75.5	9.7	
1994	35.2	7.1	62.4	13.5	2.8	92.6	186.2	518.8	34.7	73.4	15.5	
1995	34.0	6.3	61.7	12.6	6.7	122.0	190.3	573.3	55.7	66.9	11.7	
1996	27.1	3.3	64.9	12.7	11.0	147.7	164.7	616	60.4	67.1	11.4	0.0
1997	31.3	2.6	86.5	4.5	15.3	177.1	184.4	658	70.9	62.3	15.1	0.3
1998	33.5	2.3	100.2	0.8	22.0	218.0	233.3	693.2	78.7	69.4	16.3	0.5
1999	39.3	2.5	110.7	0.2	45.7	213.9	231.6	625.2	96.9	68.3	23.2	0.6
2000	43.9	1.7	140.1	1.6	109.5	244.7	244.7	638.5	140.9	78.6	31.9	1.1
2001	64.4	1.7	216.7	3.2	178.2	238.3	238.3	591.2	173.4	69.0	48.1	0.8
2002	125.9	1.1	321.0	2.1	89.4	145.6	254.4	642.3	180.6	68.7	89.1	0.2
2003	187.8	1.4	392.4	1.2	195.9	127.9	269.0	616.2	231.8	78.0	140.5	0.2
2004	277.2	na	455.9	na	323.3	na	226.4	na	141.3	na	178.6	na

Source: US ITC, US Department of Commerce, Otxea Eurostat

Note: US \$ exchange rates based on rates for 31 December in the relevant year

The critical issue concerning this rapid process of industrialization is the relationship between total exports and of clothing and those under AGOA qualifying rules from these countries (Table 4). For most SSA countries the vast bulk of their clothing exports to the US have been via AGOA's preferential trade access which has been the principal mechanism stimulating and maintaining the relatively major increase in clothing production in these countries. The eligible SSA countries that have been able to lock into the US clothing value chain and substantially increase the production of garments have exported well over 90% of their clothing to the US under AGOA. The impact that this clothing based industrialization process has had on creating wage employment and reducing poverty in these poor SSA countries is hugely significant.

The contrast to this trend have been Mauritius and South Africa, which up until 2003 only exported a maximum of only 50% and 55% respectively through AGOA. Both were subject to the triple-stage transformation rule, and hence, given their ability to compete globally, they could export to the US outside of AGOA. Secondly, this trend starts to change dramatically in 2004. However, the proportion of AGOA clothing qualifying exports from South Africa as a percentage of total clothing exports jumps dramatically to 81%, while Mauritius jumps to 65%. In both cases, but more significantly in the South African case, this proportional increase is a direct result of the decline of total clothing exports to the US. Principally this is because of the near total collapse of its non-AGOA clothing exports. Mauritius still managed to maintain a small upward trend in its AGOA related exports, but in the South African case, AGOA related clothing exports declined as well. Quite clearly both countries were severely hit by the end of the MFA and the rise of China. In South's case this was exacerbated by the rapid strengthening of the Rand, which made it difficult to compete even under the tariff protection of AGOA. The South African clothing exporters are only currently viable as a result of their preferential access to the US clothing value chain through AGOA qualification.

Table 4: AGOA qualifying as share of total clothing exports to US, 2001 – 2003 (US\$m)

Country	2001	%	2002	%	2003	%	2004	%
Lesotho	129.2	60.1	317.7	98.9	372.6	94.9	447.6	98.2
Madagascar	92.1	51.8	75.4	84.4	186.3	94.9	314.5	97.3
Kenya	51.7	80.0	121.3	96.6	176.2	93.9	271.5	97.9
Mauritius	38.9	16.3	106.5	41.8	135.0	50.2	147.8	65.3
Swaziland	8.2	17.1	73.7	82.7	126.9	90.2	175.6	98.3
South Africa	30.4	17.4	85	46.9	126.6	54.5	114.7	81.2

Source: US Department of Commerce, Otexa

Table 5 shows the US customs duty rates and China-US quota costs between synthetic and cotton products. Exports to the US have been protected by two factors - the percentage duty rate (tariff) and the US\$ cost of buying import quota. With the end of the MFA the latter has disappeared and is no longer an add-on cost to exports from countries such as China. Then the principal defence countries with preferential agreements have is the duty rate imposed by the US government. For synthetic sweaters (32%) or men's suits (27.3%) this still maintains a substantial rate of protection against cheap exporting competitors. But with respect to cotton products, the duty rate providing protection (on average only about 14% with peaks rarely exceeding 20%) may not be substantial enough to protect producers from Asian competitors.

Table 5: US customs duty rates and China-US quota costs

Item	General duty rate	2003 quota price/dozen
Cotton garments		
Knit men's shirts	19.7%	\$32.50
Knit T-shirts	16.5%	\$32.50
Woven men's trousers	10.3%	\$39.00
Woven women's dresses	8.4%	\$30.50
Synthetic knit/woven garments		
Knit women's skirts	16.0%	\$35.00
Knit Sweaters	32.0%	\$23.50
Woven men's suits	27.3%	\$90.00
Woven women's dresses	16.0%	\$37.00

www.chinaquota.com Sources: General US duty rates: Harmonized tariff schedule; 2003 reference prices for Chinese/US quota

A disadvantage for SSA is that it is not a particularly low-cost location, especially relative to Asia. Labour costs are not as low as many competitors in SE Asia, productivity is lower, lead times are long and non-labour input costs are higher. Further disadvantages include logistics (notably transport costs and longer lead times), unreliable telecommunication systems and inadequate physical and technical infrastructure. Many argue that SSA firms will find it difficult to compete in the new post MFA quota-free environment, and it is unclear whether AGOA and EU preferences will be sufficient to keep the industry competitive outside of the man-made fibre and woollen clothing sub-sectors where SSA is considered competitive and where US import duties are high (Economist Intelligence Unit 2004).

It is this complex issue of the role of preferential trade access (known as 'special and differential treatment' in WTO terminology) that the current study on Madagascar seeks to disentangle. A holistic analysis requires tackling the issue from a number of angles - researching the dynamics underlying US buyer decisions, those of the third party Asian 'system integrators' who manage the value chain for these buyers, and finally the dynamics operating in SSA countries themselves. This study is focused simply on the latter set of issues. We have therefore sought to examine what the internal industry dynamics and government preparedness within Madagascar are in the post MFA environment.

Findings from Madagascar

Using a variety of qualitative and quantitative techniques, more information was sought to better understand the current situation for the clothing industry in Madagascar. A total of 21 firms were interviewed during the three weeks of field research undertaken in Madagascar. Of the total clothing factory population of 118 firms according to a list obtained at the Ministry of Trade, Industry, and the Private Sector. All but four of them are located within the environs of Antananarivo, with 2 factories in Antsirabe and 2 factories in Mahajanga. All but two of the firms sampled had production units and offices located in the capital of Madagascar, Antananarivo (n=20). Two firms surveyed had production units in Antsirabe, a city three hours south of Antananarivo.

Firms were selected by nationality (of the majority of the shareholders or owners) and size (number of employees). Firms selected were broken down by five major nationality groupings: Asian, Malagasy, Mauritian, European and American (US). Two nationalities are represented in the Asian group: Chinese and Sri Lankan. European Union firms were from France and the Netherlands. It was decided to use regional groupings such as 'EU' and 'Asian' because the sample size was not large enough to draw conclusions about individual nationalities.

Table 6: Key Characteristics of Firms Interviewed by Export Market (n=21)

Characteristics	Market of Destination			
	Predominantly US Market	Predominantly EU Market	Equally to Both Markets	All Firms
# of firms	12	8	1	21
Average Age	5.8 years	10.4 years	14 years	7.3 years
Nationality of firms	Asian (6, n=8) Malagasy (3, n=5) US (2, n=2) EU (1, n=4)	EU (3, n=4) Malagasy (2, n=5) Mauritian (2, n=2) Asian (1, n=8)	Asian (1, n=8)	N/A
Average # of Employees	1819	1401	3500	1740
Average # of Clients: Range:	6 clients Range from 2-20	14 clients Range from 1-50	15	9 clients Range from 1-50

US exporting firms are larger and younger, a consequence of AGOA duty-free preference into the US only starting in 2001, while those exporting to the EU are smaller and older. Firms in the sample corroborated Gibbon's (2002 and 2003) findings that the Asian firms were more likely to export to the US than to the EU. As shown in Table 6, US firms exported predominantly to the US, and Mauritian firms predominantly exported to the EU. Malagasy-owned firms were split, with three firms primarily exporting to the US and two exporting to the EU. There was one firm of Asian nationality exporting equally to both markets. A firm was categorized as exporting predominately to one market if 70% or more of its production went to one destination. Several firms exported to both markets, but one market destination was largely preponderate. Three firm managers said they would like to strike a better balance between the two markets rather than produce almost exclusively for one or the other:

“Currently, I'm 90% US and 10% EU. I'd like to see 70% US and 30% EU by the end of 2005. But the ideal is 60% US and 40% EU. The EU offers better prices, so I have a better chance of breaking even.”

Exporting to both markets allows producers to balance large and small orders and ensures they have year-round production. There is also a difference between EU clients and US clients. US buyers, according to Gibbon (2002), demand a high percentage of total production, making it difficult for producers to have other clients. Evidence in Madagascar supports this conclusion:

“To supply the US, the factory must work, for example, 10 days straight, 24 hours per day. This is difficult for a smaller producer to accomplish especially if they have other customers.”

Serving the US market make it difficult to plan for the future as a firm never knows if the US buyer will come back to them. EU clients, although demanding smaller orders, are seen as being more stable clients. As a key informant explained,

“With the EU firms, you build a relationship with the client, but with the US firm you are a yo-yo. The US client comes back to you when it suits them.”

This is reinforced by three firm managers who stated that they will only produce for European clients because American clients are too inflexible in their demands.

The firms interviewed produced a variety of garments. Three of the firms interviewed made cashmere sweaters. As cashmere is considered a scarce material, garments made from cashmere do not need to meet the rule of origin restrictions placed on other goods. Cashmere sweaters are also high value-added products.

However, Madagascar produces mostly cotton apparel in both knitted and woven segments. Knitted or woven fabric garments fall into different product groups and face different levels of tariffs. Of the 21 sampled firms, six firms (29%) produced only knitted products. The major knitted product is by far sweaters: (HS 6110) which alone accounted for 9% of Madagascar's total exports in 2003, the latest year for which data is available (COMTRADE 2003). Six firms (29%) interviewed made jeans and other cotton trousers for men and women. Combined, these two categories (HS 6203 and 6204), accounted for 11% of Madagascar's total exports in 2003 (COMTRADE 2003). These three categories of apparel together accounted for 20% of Madagascar's *total* exports. Madagascar is thus heavily reliant on a few categories of exports for export revenue. This indicates that these categories are dominant because historically they were quota-constrained, and producers went to Madagascar to circumvent quota restrictions.

The Role of Buyers

Madagascar's factories produce for a variety of buyers. Of the 21 interviewed, 18 firms specified the types of buyers they served. Table 7 shows the types of clients served, and the number of times that firms reported working for a certain type of client. By far, firms in Madagascar served independent retailers the most (10), and most of the independent retailers are US-based. The next highest category served is department store label, also for the US market. The lower end-market segments, including low-end department stores and discounters, are generally associated with lower margins and the US market (Gibbon 2002). Firms serving the EU market were more likely to sell to supermarkets, mail-order catalogues, and high-end to mid department stores in general.

Table 7: Clients Served in Madagascar (n=18)²

Type of Client	Examples of Types of Clients Mentioned	No. of firms reporting as serving that client type
Supermarket	Carrefour, Auchan,	3
Department Store, High-end	Galleries Lafayette, Dillard's, P und C	5
Department Store, mid	Sears, JCPenny's	3
Department Store, Low-end	Mervyn's, C&A	3
Discounter	Kmart, Wal-mart, Target	3
Department Store Label	Gloria Vanderbilt, I.e.i., Columbia, Levi's, Jordache, US Polo	8
Independent Retailer	Gap Group, Benetton, Decathlon, Celio, The Limited, Zara	10
Wholesalers	Costco	2
Boutiques		1
Specialized workwear	Groupe Quintet	1
Mail-order	La Redoute, Vert Baudet	2

*Note: Firms reported serving different categories of clients concurrently.

Table 8 shows the spread of countries to which firms in Madagascar reported exporting. The connection with France is clearly seen: of the 21 firms surveyed, 11 of them exported to France. Only two firms exporting to the EU also export in small amounts to the US, and 3 firms exporting to the US also export a certain percentage to EU countries. Firms realize that to

² Classifications adapted from Gibbon 2003.

balance their production, it is best to sit on both markets, as small EU orders can fill up empty production, or large US orders can fill up production for long periods.

“I know that it is bad to focus on one market. Our ratio of 70% US and 30% EU is a good ratio, but we are looking into new EU markets: France, Germany. The difference between the US and the EU market is that the US offers prices 5% lower than the EU.”

“We produce 93% for the US. We are trying to start for the EU or Canadian market, trying to diversify our client base. We would like to see 90% US, 3% France, 3% Canada.”

One firm disagreed with this however: they found that the US was too demanding. This firm was decreasing their production to the US so that they can focus on their EU clients:

“We don’t do the US. In 2002, we had 3 units dedicated to the US, but now our strategy is to get out of the US market. The US market is too demanding and strict with their orders. The EU is much easier to work with.”

In sum, the different markets have different characteristics that make them attractive based on the needs of the manufacturers. Manufacturers can decide for what markets they want to produce, depending on their firm strategy.

Table 8: Location of Clients Reported

	End-market country	No. of firms reporting exports to that country
Asia	Japan	1
European Union	France	11
	United Kingdom	4
	Germany	3
	Italy	3
	Netherlands	1
	Spain	1
North America	US	14

Table 9 details the different methods producers use to obtain orders. Firms with parent companies are sent orders; it is the parent company that has contact with buyers. Firms that do not have parent companies acquired their clients through indirect contact, i.e. via a sourcing office. About half (n=11) of the firms interviewed obtained their clients through their parent company located in Asia, the US, or Europe. One firm has agents in Europe that work to sell their products, but the agents are non-dedicated. Two firms are working in partnership with the local textile mill in a clustering arrangement to offer full package supply from weaving to delivery. The textile mill, Cotona, seeks out clients and attends trade fairs on behalf of firms. Although many mentioned word of mouth, it was not the main approach used for most firms except for one. Two firms have direct representatives in other countries.

Table 9: Main Method of Obtaining Buyers by Firms in Madagascar

	Type of Method	# of firms reporting use of this method
Direct contact	Word of mouth	1
	Trade fair	1
	Own representatives overseas, incl sales offices	2
	Other direct contact	2
Indirect	In partnership with Cotona	2
	Agents in other countries	2
	Parent company	11
	Agents in Madagascar	1

How firms in Madagascar obtained their buyers is essential to figuring out what role Madagascar fills in the value chain and how vulnerable the industry there is. Are buyers seeking out producers in Madagascar or must producers chase after buyers? It appears that buyers flocked to Madagascar after AGOA preferences started, but most buyers fled after the crisis.

“Buyers talked about Madagascar a lot in 2000-1, encouraging suppliers to come here, but no one is talking about it now.”

Anecdotal evidence suggests that the structure of buying and sourcing within the international garment industry as a whole is changing. Firms mentioned that relationships with buyers, mainly European, are becoming more direct, with fewer European buyers passing through intermediaries or sourcing offices now. Some buyers have a dual strategy: they source via buying or sourcing houses as well as directly with the manufacturers. For manufacturers with parents companies, buyers pass via the parent company office in Hong Kong, but the relationship between the buyer and the parent company was reported as being direct, with no intermediaries. Certainly in Madagascar it signals a fundamental change in the nature of the relationship between buyer and producers: it is the end or the decreasing of importance of triangular manufacturing. If this pertains globally then it deserves further research. American buyers, however, still use a mix of independent sourcing and intermediaries.

The presence of buying offices appears to play an important role. Before the crisis, different buyers had offices in Madagascar, including Levi’s, the Gap, and Liz Claiborne. Sourcing agents, including MAST (the sourcing agents for The Limited Group) Linmark, and Li & Fung also had offices in Madagascar. Sourcing offices play a key role in sending orders to countries. Unfortunately, the crisis forced sourcing offices to close. This has significant repercussions for the future of Madagascar’s clothing industry.

“If a buyer leaves, then so will the vendors [producers]. It is the buyers who decide the future of factories in Madagascar.”

Buyers can do more than just give orders. In the automotive value chain, end-buyers assist their suppliers in upgrading their capabilities. The garment value chain works differently depending on the type of garment being produced. Generally, those producing the cheapest garments receive no assistance from end-buyers. Gibbon found that independent retailers like Gap and Benetton are “widely considered to usually make poor or non-existent contributions to improvements in supplier capabilities” (2002: 38). Only firms that produce for high-end buyers mentioned that buyers helped them upgrade. One firm in particular that has developed a long-term relationship with a high-end buyer has production specialists who visit firms to upgrade their production processes.

Quality control (QC) and quality assurance (QA)³ seem to be shifting from externally-imposed processes to being incorporated organically into the production process at each stage. Whereas in the past clients would regularly send quality controllers to inspect the production line themselves, it is now expected that the firm will ensure an acceptable quality level. When asked about quality control, most firms were equipped with their own trained quality control people; rarely was the client or an outside agency involved. One quality assurance agency was interviewed, but their role was more to assist the producers in finishing the order and doing spot checks, rather than to sit on the production lines. If the quality control or assurance is external, the QC can be done by either a QC representative from the client, or through an outside agency.

³ QC is performed continually throughout production to verify that the end product is of high quality. QA focuses on the processes being used to manage and deliver, and can be performed by a third-party reviewer.

In Madagascar, there was one internal North American client quality assurance office, and two external quality assurance agencies that clients hired to oversee quality for them. One quality assurance agency said that the way that clients oversee quality control has changed, particularly for those producing for the US market.

“More and more, US buyers are sending their own QA to the factories rather than hiring an outside agent to inspect garments. At the same time, buyers expect firms to become responsible for their own QC.”

Quality was mentioned by several producers as being a way to attract and keep clients who are willing to pay more. By having a consistently high quality product, firms reported that buyers were ready to offer a higher price.

“My strategy is to upgrade the quality [of our product]. If we maintain quality, the buyers will pay 10 cents more.”

Factors of Competitiveness

Outside factors also play a role in the competitiveness of firms. Producers mentioned that increasing production costs are increasing their vulnerability. Logistical problems with customs, inland and sea transport, electricity costs and reliability, and rent increase the vulnerability of producers in Madagascar. The largest logistical problem by far is transport – to, from, and within Madagascar. Inefficiencies and delays at ports and with transport associations make it difficult for producers in Madagascar to compete. Rising rent costs and electricity put an additional squeeze on producers’ bottom lines.

Transport and Customs

Over three-quarters (n=16, 76%) of firms surveyed reported that transportation within, to and from Madagascar was a hindrance to efficient production. The major problem cited was the condition of the road between the capital, Antananarivo and the port, Tamatave, a distance of 300 kilometres. It can take up to one week for containers of raw materials to arrive at the factories from the port due to delays at customs and slow travel speeds. In addition, the capital, around which most factories are located, is plagued by traffic jams. Cargo trucks going in and out of the capital are limited by law to rolling only between the hours of 20:00 and 6:00. Road capacity in another issue: were production in Madagascar to increase, the roads might not be able to support a corresponding increase in traffic (Salinger 2003, 47).

For many firms, Madagascar’s location is the greatest hindrance. Due to Madagascar’s isolation from not only from raw material suppliers but also destination markets, it takes producers up to four months to complete an order. This amount of time is increasingly unacceptable for buyers. Many time-dependent fashion lines and buyers are out of reach for producers in Madagascar because of time constraints. The time breakdown in Table 10 shows just how tight producers’ timelines are: from the day the order is placed, it takes approximately one week for the fabric to be made, three weeks to have it shipped from the fabric factory (usually in China), and one week to have it shipped from the port to the factory. (A transportation industry informant, however, qualified this: *“the one week is the minimum, with delays sometimes extending to two weeks or even to one month.”*). Once the container reaches the factory, it takes an average of three weeks to manufacture the product depending on the size of the order and another week in transit back to the port. Finally, it takes three weeks for a container to arrive at European destinations, with a minimum of four weeks required for US destinations. This equals a minimum lead time of 13 weeks for production from order placement to delivery.

Table Error! No text of specified style in document.: Production Steps and Corresponding Time for Firms in Madagascar

Production Step	Time necessary
Fabric production	1-2 weeks
Shipment of fabric and accessories	3 weeks (average, Asia to Madagascar)
Shipment from port to factory, including customs inspections	7 days Tamatave to Antananarivo 8-9 days Tamatave to Antsirabe
Manufacturing	3 weeks
Shipment back to port, including customs inspections	1 week
Shipment to destination market	3 weeks Tamatave to EU; 4 weeks (min) to US

Such long lead times limit producers' possible products by forcing a CMT focus and hinder the industry's and producers' ability to upgrade. Many echoed one informant's statement:

“Lead times are important for turn around. Madagascar is involved in replenishment goods: it is core products that are being done here. It is hard to do fashion dependent items.”

Transport issues for some have made it difficult to expand to new markets. Factory owners would like to expand to new markets, but find the distances and delays difficult to foster new producer-client relationships:

“We have one client in the US, but we’ve had a hard time developing the relationship. The main problem isn’t China, it’s the delays [in transport]”

Long lead times and high transport costs make producers vulnerable to competition from places that are closer to the US and EU markets. Producers are finding it difficult to move up to higher value-added garments as they are usually more fashion dependent and must be delivered to market quickly. Manufacturers in Madagascar would find it difficult to go for flexible delivery, which some buyers prefer to better manage their inventory.

Frequency of boats arriving with raw materials is a limiting factor. The two largest shipping companies, Maersk Logistics and MSC (Mediterranean Shipping Company) have one boat per week arriving from Asia with raw materials. Some factory owners compared the lack of competition in shipping to a cartel. For export however, the frequency of boats is greater. Maersk has four boats per week that take exports to the port at Durban, South Africa, from where containers are transferred to ships destined for the EU and the US.

The cost of transport to and from Madagascar has also been increasing regularly. Rising shipping prices are becoming difficult for producers to manage. Producers are finding their margins being squeezed as buyers demand cheaper prices and transport costs rise. According to a transportation industry official,

“The costs for maritime transport from Asia have increased the most. A 20-foot container in Jan 2004 cost \$1200 to ship from Asia to Madagascar. In Dec 2004, that price rose to \$1900. This is an increase of 58% . . . Now it is \$2,230 (as of April 2005) due to rising petrol prices.”

There is a lack of competition amongst transport companies in Madagascar, and this shows in the prices demanded for inland transport. One manufacturer stated that transport costs add 30 US cents to each garment produced in his factory. Another stated that transport costs added 10% to the final product. These additional costs, plus the uncertainties associated with the possibility of delays along the road between Tamatave and Antananarivo contribute to the precarious

situation of garment producers in Madagascar. Several interviewees said that it cost just as much to send a container from Tamatave (the port) to Antananarivo as it does to get a container from the port in France to the warehouse.

“It isn’t normal that [the transport in Madagascar] is more expensive than in France [given that fuel prices are higher in France than in Madagascar].”

“Not only is the ground transport between Bordeaux and Dunkirk cheaper, it’s faster too [than between Tamatave to Tana].”

There were also complaints of long delays in moving containers through customs. Customs inspectors were considered inefficient, and a few firms claimed that sometimes minor bribes such as cigarettes were necessary to facilitate container inspections. Although this was improving, problems still remain in moving containers quickly through. One firm mentioned that a new computerized system for tracking containers through the port had been instituted, but that the customs inspectors ‘refused’ to learn the new system. One factory manager faced a delay of three days when the main customs inspector took two days leave the week we visited, without appointing someone else to inspect containers.

Electricity and Rent

Another difficulty that firms in Madagascar are facing is increasing rent costs. Six firms interviewed (29%) report high or increasing rent costs. The firms interviewed pay \$2 to \$5 per square metre per month, amounting to 10-20% of the price of the finished garment. One firm is considering moving elsewhere within Madagascar or relocating entirely due to rent costs. One firm bought its premises after the crisis when rent prices were low, and has found that buying and building is cheaper than renting.

Energy prices are also increasing for producers in Madagascar. One key informant told us

“JIRAMA’s prices have increased 25% over the past 18 months. It will go up 18% this month [Apr].”

Additional increases are expected to pay for the modernization of the outdated equipment that JIRAMA, the national electricity company, currently uses. In May and June 2005 after the field research was undertaken, producers have experienced further difficulties with the electricity supply. According to an industry official in Madagascar, prices for electricity have increased an additional 30-60%, further squeezing producers’ bottom lines. Besides cost increases, fluctuating power currents and power outages of up to two hours during the day occur daily, making it difficult for producers to fill their orders. Several of the companies interviewed are in difficulty as they have been unable to finish their orders. Power outages and fluctuations, in addition to halting production, also introduces flaws into fabrics and knit-to-shape items, thus requiring that the item or fabric being knitted be redone or scrapped.

Raw Materials

The main raw material used in clothing is fabric, with buttons, thread, tags and other accessories the other basic materials that must be sourced. Despite the presence of textile factories in Madagascar, all but two of the factories reported obtained the majority of their fabric and accessories from other countries. One firm is vertically integrated and weaves and dyes its own fabric, finding this more efficient than purchasing and shipping fabric from Asia. Another firm sources approximately 85% of their fabric from their own mill in Mauritius.

Firms that source from abroad usually source from China and India. Eleven firms (52%), source solely from Asia, six of whom said they only source from China. Other Asian countries

mentioned include Sri Lanka, Indonesia and Pakistan. Within Europe, four firms source a portion of their fabric from Italy, three from France, one from the Netherlands and one from Switzerland. Three firms (14%) said that they sourced fabric locally, but no more than 40% of their fabric needs. Many firm owners would have like to source from Cotona, but their quality is unacceptable for the international market or its prices are too high. Within sub-Saharan Africa, one firm sourced jean fabric from a denim mill in Lesotho, and two firms sourced fabric from Mauritius.

Despite all the above mentioned difficulties, including increasing transport, rental and electricity costs, producers in Madagascar have so far been able to remain competitive and it is only recently that producers have encountered problems. Yet at the same time buyers are pressing producers for lower prices for garments.

Labour, Wages and Productivity in Madagascar

One of the main attractions for producers in Madagascar is the low wage rates and relatively productive workforce. Wages in Madagascar are amongst the lowest in the world and productivity, although low, is improving. Workers in Madagascar are considered to be skilled with their hands, with many firms using hand and machine embroidery.

According to the firm managers interviewed, workers are given a base salary with a minimum required number of pieces to be completed. In addition to the basic salary, workers are given individual or team bonuses, depending on the bonus strategy used by each firm. Twelve firms (57%) used an individual bonus system and four firms (20%) used a team bonus system. Five firms (24%) did not report what type of bonus system they used. Firms reported that workers base salaries start at 20€per month and rise to 40€per month, plus bonuses. Over half (57%) of manufacturers feel that workers are not necessarily motivated to produce more, despite incentive programs, agreeing with this statement:

“The Malagasies could produce more if they put their minds to it. Right now they just do enough to put food on the table, and nothing more.”

However, six producers (29%) said that productivity was not a problem, and three (14%) gave no response to the question.

High productivity levels are key for a firm’s and an industry’s ability to compete. It allows a firm to complete an order faster and lowers the number of workers necessary to complete an order, thus lowering the average costs. In 2002, productivity levels of Malagasy workers, although high for SSA workers, were computed at being less than half of those of Chinese workers and 75% of those of Mauritian workers (Tait 2002). However, indications are that since 2002 productivity levels have increased substantially. An industry official believes that productivity in Madagascar is about 70-80% the international average, with slight variations between firms. As interviewees stated,

“if workers in China can produce 10 shirts in a day, workers (here) can only produce 6 or 7”.

“We now have 700 employees, but they are 40% more productive than when we had 1100 before the crisis. The crisis allowed us to restructure. But is this enough to compete with China? No!”

Depending on the type of work, productivity levels varied. Filling repeat orders for US and EU buyers is easier as productivity levels are higher and turnaround times faster on repeat orders.

“We are trying to do core product runs with our buyer so that our productivity is quite high”

Firms preferred doing repeat goods because that allowed their workers to obtain very high levels of productivity. One manufacturer explained that it always takes a few days turn around time to change the production line from one order to the next. This takes a few days, longer if workers have difficulties adapting to the new product. When manufacturers have large orders of 30,000 to 100,000 pieces, turn around time does not matter as much because workers have time to learn. With smaller orders, the turnaround time is the same, but only 10-20,000 pieces are produced. Maintaining quality is also difficult as the number of rejected garments is usually the same no matter how large the order.

“When orders are smaller, it is hard to maintain quality.”

“For an order of 10-30,000 pieces, productivity isn’t a problem, but for an order of less than 1000, it’s a problem.”

Malagasy workers are considered by the firms to be very adept with close-up work. It is these abilities, especially in embroidery, that give Madagascar an advantage over other countries, but as other countries’ workers become skilled, such advantages may erode over time.

“Workers learn very fast and have quick hands.”

“For work requiring fingers, Madagascar does better. This isn’t rumour: it’s the truth.”

Training

Lack of training was mentioned by many interviewees as being a hindrance to efficient production. Due to the lack of a training school for textile and clothing workers, workers arrive without any skills at all and must be trained in-house. As mentioned in the previous chapter, there are no permanent training schools for sewing machine operators and others in the clothing and textile industry. Firms are always looking for trained workers to fill in empty positions. It takes time to train a worker on the different machines:

“It takes 3-6 months to train people on knitting machines... We need stable people who stay and are skilled”

Turnover and Absenteeism

A lack of training goes hand in hand with high turnover. When people acquire skills, they become valued workers and move to another factory that pays more for skills. Three firms mentioned that university graduates were working on the production lines as it was difficult for them to find well-paying jobs, and production line jobs allowed them to not only earn a base salary, but they were the most likely to profit from the bonuses offered to workers.

Relatively speaking, turnover was less pressing than increasing rent and shipping costs. Turnover seemed to be related to the location of the factory. Interviewees in factories located in large industrial zones in and around Antananarivo complained about workers leaving as soon as they were trained. As mentioned above, after being trained, workers go to the firm next door and receive higher wages because they were then considered as having experience. Firms mentioned turnover rates of 2-10% of their total workforce. Knitting factories in particular reported high turnover at the beginning stages of training.

“Turnover is very high for new workers – after three days they leave. Empty machines don’t produce anything. We always have empty machines”

“Knit workers leave – it’s hard, heavy work, and you stand all day. It isn’t pleasant.”

But some firms mentioned that absenteeism is a worse problem than turnover. One firm, which normally has a turnover rate of 2% found that its absenteeism rates increased during the planting

and harvesting seasons, as workers left to look after their farms. One firm has been more proactive about reducing their turnover. The firm decided to relocate outside of the industrial zones to make it more difficult for workers to leave.

“We wanted a location far away from other factories – to stop our employees from skipping to other factories. Workers in the industrial parks were leaving for 10 FMG⁴ more. Although we had to pay a lot in the beginning to train the unskilled workers here, we now have less than 2% turnover per year.”

An ILO-sponsored workshop between producers, workers and government in Madagascar found the producers are not looking for a training school per se, but rather for government assistance with in-hour training (ILO 2004). As another strategy to combat absenteeism, some factories give a bonus at the end of each month if the worker was present every day.

Social Actions

‘Social actions’ or non-monetary benefits some firms provide to their workers are particular to Madagascar. During the devaluation in 2004, some firms, for example, offer as a non-monetary benefit a bag of rice. A number of firms provide rice at a subsidized price to their employees, the cost of which is later withdrawn from the employee’s pay check. Otherwise, to receive duty-free rice the employee would be forced to stand in line for government (imported) duty-free rice, causing them to be absent from work. From January to June 2004, workers would miss work to stand in line for government-subsidized rice, the only rice workers could afford. It appears that such assistance has been discontinued since the currency has stabilized. Factories reported serving free lunches for their employees, with one factory providing three meals per day. Three firms also had clinics onsite.

Typology of Performance

After compiling data from the interviews, four types of status emerged from the data. Since one of the objectives of this thesis is to ascertain the effects of the changing international context on clothing firms in Madagascar, identifying the current status of the firms interviewed helps us be aware of the general health of the industry. It became apparent that firms fell into four distinct categories of status based on the criteria of employment (whether or not they had laid off workers) and number of orders. This section provides a snapshot of firms at the time research was undertaken. Firms are classified as ‘shrinking,’ ‘stable,’ ‘wait and see,’ or ‘expanding’. A firm identified as *shrinking* had no orders past August 2005, were currently producing at partial capacity, and had permanently laid-off one-third to one-half of their employees. Closure appeared to be imminent. *Wait and see* means that a firm has orders for six months, but will not be making any investments in the near future as the future is unclear. Some ‘wait and see’ firms had temporarily laid-off workers. *Stable* firms have orders at least through next year and had no changes in employment levels; they did not seem in danger of closing their doors. *Expanding* firms are increasing the number of production lines and employees. Using this rubric, four (19%) firms were identified as are shrinking, two (10%) are wait and see, 11 (52%) as stable, and four (19%) as expanding (

Table 1).

Table 11: Firm Current Status by Nationality and Market Destination

	Nationality of Firms					MARKET	
	US	EU					
Current Status	Asian	American	European	Mauritian	Malagasy		
Shrinking	F I K				N	F I K N	
Wait and see	O		S			O S	

⁴ Franc malgache – Malagasy franc. The official currency in Madagascar until January 2005. It has been replaced by the ariary. However, the FMG is still in circulation.

Stable	HU B	W	A Q	R	CG J V	CH U V WB*	AG J RQ B*
Expanding	E	T	X	D		T	DE X

* Firm B exports equally to both markets.

Note: Firms are identified by a randomly assigned letter.

The most significant finding is that market destination has a major impact on the status of the firms. The four firms identified as shrinking and the two that are 'wait and see' are firms serving the US market, indicating that half of those producing for the US have uncertain futures past 2005. Of the 11 firms considered stable, five serve the US and five serve the EU markets, with one firm equally serving both markets. Asian firms serving the US market were mostly likely to be identified as shrinking or wait and see. One Malagasy firm was identified as shrinking. These firms face tough competition from China and other competitors on the product level. The firms considered to be shrinking specialize in basic denim jeans and t-shirts and have seen prices forced down by intense international competition.

Significantly there are no firms serving the EU market that are identified as shrinking or wait and see. Furthermore three out of the four classified as expanding and half the firms identified as stable serve the EU market. This reinforces the claim by manufacturers that European buyers were seen as being easier to work with and better at maintaining relationships than US buyers.

As regards nationality affecting status, the Asian firms were the most volatile, being spread over all categories and only one amongst the expanding firms. Malagasy firms seem able to remain secure, primarily occupying the stable category. The Mauritian, American, and EU firms were basically unthreatened by the situation.

Despite how dire the situation was predicted to be, 70% of the sampled firms will survive at least until next year. Overall in the industry, by April 2005, only five of 118 textile and clothing firms had closed, leaving 5000 people unemployed. An additional three firms laid off a total of 3000 people (Rambelo 2005).

Macroeconomic Conditions and Context

The operating conditions for firms in Madagascar do not occur in isolation. Macroeconomic conditions, including the currency and government focus on rural development, have affected industry in Madagascar. Prices that producers obtain for their garments are in flux: since the end of the quotas, prices have dropped dramatically. As costs rise while prices received drop, producers are being squeezed from both sides. This section first summarizes the current performance of the clothing and textile industry, then discusses further government's industrial policy, falling international prices and competition with China.

Government Industrial Policy

The clothing and textile industry in Madagascar is not the main focus of the government's development strategy. Interviews with industry officials and firms confirmed this general view. The government is currently focused on rural development, not industrial development. Firms repeatedly mentioned that there was a lack of interest of government in the industry, despite its importance in terms of employment and revenue generated. Most interviewees reported never having seen a government official. Firm managers with experience in other countries compared the interest of government in Madagascar to elsewhere, finding that other countries tend to be more attentive to the problems the clothing and textile industry faces.

"Government is concentrating on agriculture [so]... people 'will always have enough to eat'. At this point, it is too late for the government to do anything anyways [for the clothing industry]."

“In [other countries with textile factories], the government comes as soon as there is a problem to see if they can do something.”

“The government is a wall. They are not interested in textiles. The companies in the EPZ are foreign firms, not Malagasy, so we are not considered important.”

Firms operate with little assistance, communication or involvement on behalf of the government. It appears that an open channel of communication between the Ministry of Industry and firms or their associations would assist the industry in clearing up inconveniences that hinder the smooth flow of commerce or in seeing if the government can actually do something to help the firms. The government does offer assistance to industry in general in the form of the EPZ legislation: firms pay no or little corporate tax for the first five years of production. What assistance the government has provided is more crisis-driven than policy-driven. After the 2002 political crisis, the government program set up the Fonds d'appui pour le Secteur Privé (Support Funds for the Private Sector: FASP) program that assisted firms with their post-crisis recovery, including providing funds for capital investments and training.

“Government has helped. They gave us a loan through FASP, and offered training for heads of production and workers.”

However, that program reached the end of its mandate in 2004. JUMPSTART, a program funded by USAID, assisted small and medium handicraft and clothing enterprises develop their business skills and find clients. One firm interviewed found their clients in this manner.

Post-crisis Resilience

Before the crisis, an estimated 120,000 people were employed in EPZ textile firms. Between 30 and 40,000 jobs were lost due to the crisis as companies restructured or closed permanently (Salinger 2003 and USAID 2005). Of the estimated 140 to 160 EPZ textile and clothing firms open in 2001, approximately 25% of the textile and clothing firms left. There are currently 118 EPZ textile and clothing firms registered with the Ministry of Trade, Industry and Private Sector.

Of the 21 firms interviewed, 17 were present and producing in Madagascar when the 2002 political crisis started. Of those 17, seven firms managed to stay open despite the conditions. Ten firms were unable to meet orders over the crisis period and closed. Firms that remained open continued to produce because they were concerned about losing longstanding clients with whom they had developed a relationship.

“During the crisis, it was better to get the product out no matter what than lose the client.”

“We didn't lose any customers in 2002. We did everything possible to satisfy our customers, even flying raw materials in to Tana.”

Firms went to great lengths to export their garments, especially once the main road to the port was blockaded. The road between Tamatave and Antananarivo was blockaded from March to July 2002, during which time firms had to find other means of transport. Some firms had to send their shipments by air at an enormous cost, causing some to fall deeply into debt. Three firms reported sending shipments by canoe to the port after the roads were blocked; firms and buyers both reserved entire planes to take shipments to Europe and the United States, at tremendous costs.

Interviewees stressed that they could not lose a client, to do so was to let the parent company down. It was unknown if the clients would come back after the crisis was finished. The buying

offices for MAST, Li & Fung, Eddie Bauer, Gap, Dockers and Levi's closed during the crisis or its immediate aftermath and have not been reopened. Such buying office are quickly set up and quickly moved, giving the industry a footloose nature. When there is no buying office in-country, there is an additional distance between the buyers and the producer, making it more difficult for firms to have steady contact with buyers in Madagascar, and in turn, to obtain orders from buyers.

Prices and Upgrading

Not only has the end of the MFA released China from the quota restraints, but as the volume of garments available internationally increases, prices are decreasing for core products that most factories in Madagascar produce. Madagascar also has several cashmere producers, but the prices for their product are relatively stable. For producers who make basic denim products, which China produces in abundance, prices per dozen have decreased substantially since January 2005. Eleven firms (52%) report that prices offered per dozen have decreased 30-50% in the past six months. These firms reported difficulties making ends meet with the lower prices that their clients offered. One firm said it could not make ends meet if prices fall further and would be forced to close.

Firms were hesitant to report on prices received per garment from the buyers. One firm was forthcoming with this information. As an example of how far prices have dropped, this firm reported that price it receives per pair of basic five pocket jeans has dropped from \$5.25 to \$3.75, a 30% drop. This same firm has seen its margin on its products be reduced from 55 cents per garment to 20 cents per garment. (In a similar study we have recently conducted on the clothing and textile industry in Swaziland, prices for school uniform pants reportedly fell from \$21 per dozen to \$9.50 per dozen in January 2005.)

At the same time as there is a race to the bottom for prices, a better price can be obtained for quality. Firms mentioned that clients are willing to pay more for a better product. *"The basic product price has decreased, but clients are ready to pay for more value-added."* Producers reported receiving more orders and larger orders as they improve their quality standards. Several firms mentioned quality improvements as a strategy for the future: the firms are trying to make more fashion-dependent items with higher value-added. In essence producers are trying to move up the value chain by acquiring higher rents within the value chain via quality improvements and more value-added.

Most firms reported that clients would often compare their prices to those that could be obtained in China or India. Some firms reported not being able to meet their clients' price demands and then having that client leave.

David versus Goliath: Competition with China

Firm managers recognized that their toughest competitor is China. Interviewees constantly discussed the competition from China, in terms of its higher productivity, political stability, in-country availability of raw materials, and proximity to the US market. All these attributes make doing business in China easier, compared to Madagascar. Higher productivity and comparatively lower wages make competing with China difficult.

"In Madagascar, workers work 8 hours/day for \$50/month, which is cheap. But in China they work 12-16 hours/day with twice the productivity."

Despite these advantages, two firms reported that buyers returned after going to China. Chinese firms prefer large orders of relatively simple products. EU buyers tend to have smaller orders,

which may be why firms that export to the EU are more stable than those who produce for the US market.

“We have clients that don’t go to China because the product they want is too complicated.”

“Prices have decreased 15% to 25%. But the styles we are doing are more and more complicated because buyers pass to us orders they cannot have made in China.”

In addition, firms reported that buyers returned to Madagascar because of problems faced in China, including cultural and linguistic barriers.

“Buyers don’t want to have all their orders in China, even if China is the best competitor. So what is the alternative? Madagascar.”

“We have clients that have come back to us after going to China. They prefer a more stable environment.”

Sourcing entirely from one country can be a risky business strategy, so buyers will continue to source from other countries. The most oft quoted phrase was that buyers “do not like to put all their eggs in one basket,” indicating that buyers will not source entirely from China so as to better manage their supply chain.

Finally, a firm manager visits firms in China to learn new techniques and processes. A firm owner visited China regularly to see new technologies, production techniques and fabrics.

“I go to China twice a year. I see what the fabric suppliers are doing in China. I see what the competition is doing. They [Firms in China] don’t see us as competition. Other firms in Madagascar don’t do this [visit Chinese firms].”

Manufacturers in Madagascar face almost overwhelming competition when competing with China. In China, logistics are better organized, more services are offered, fabric and accessories are widely available, and the time to market is much shorter than for Madagascar. But what manufacturers in Madagascar do have are links to Europe and a common language and business culture. Most manufacturers are finding ways to survive.

Upgrading Strategies for Post-MFA Survival – individual and collective

Some firms find the local problems within Madagascar too great and believe the future lies elsewhere, others can no longer survive in the new international context and have closed their doors. But the industry is far from dead. The vast majority of firms are following a general upgrading strategy either by increasing productivity, upgrading quality, or expanding to different markets to operate in the new context.

Five firms (24%) are focusing solely on offering more services to clients as a post-MFA strategy, four (19%) are working on increasing the quality of their product to attract more buyers and three (14%) are concentrating on productivity. Two firms are focusing on upgrading both services and quality, while one firm is focusing on both services and productivity.

However apart from these general upgrading activities, three firms in Madagascar in particular are following unique strategies.

- One firm is a wholly-owned subsidiary of a brand name in the US market. Despite the international trend of disconnecting production from design, the parent company of the firm has embarked on a strategy of owning most of its production units outright rather than deal with intermediaries. The advantage for this Madagascar firm is a continuous production

arrangement so that there is never a wait for raw materials and the sewing lines never stop. Its competitive edge is that the parent company purchases all the raw materials to receive bulk discounts, as well as takes care of the financing for transport and production. Each factory associated with the parent company fills in a different niche of the market. Some do high-end garments, while other factories like the one in Madagascar produce mainly lower-end jeans. All production is destined for retail stores in the United States. Instead of employing different actors along the value chain for design, production and sourcing, this company has everything within the same company except the manufacturing of raw materials. By keeping everything within the same company, costs are lower than if the stages of design, sourcing and production were separate entities. However, this factory in Madagascar has little say in its future – if the strategy for the company as a whole is to pull out of sub-Saharan Africa, there is little that can be done to ensure the factory remains.

- Having only one client might be risky, but one firm's strategy is to work with a single customer producing high-end garments for the European market. Formerly a subcontractor specializing in denim jeans, this smallish CMT firm of 400 workers had the opportunity in late 2003 to work for a very high-end brand name. All the raw materials needed to make the garments arrive on the container and the firm only assembles the final garment. The buyer seems intent on developing a long-term relationship with this firm. Technicians sent by the buyer came and instructed the workers on how to assemble the garments due to the complexity of the garments. And due to the fact that the production line workers are always working with the same type of garment and fabric, workers have increased their productivity. Almost all production is consumed by the one buyer. For the near future, the strategy is to focus on this one client. Thus far, the strategy appears to be working as the firm's one-year contract with its buyer has been renewed for an additional year and it is in the running for a five-year contract.
- Typically we find a parent company in Asia owning or controlling a subsidiary factory in Madagascar. Instead, one firm is engaged in reversing this relationship. The company is based in Mauritius, but has moved production units to India while keeping production units in Madagascar. The Mauritian parent company analyzed buyer behaviour and found that buyers only go to where the sourcing offices are located. If there is no sourcing office in a country, buyers are less likely to order from that company. Hence the parent company not only opened up an office and a factory in India in January 2005, but also expanded production units in Madagascar. *'We have been in India for two months now. Buyers go to India. Before, we had to go search for buyers, now they visit India twice a year . . . In India, there are all the [fabric and accessory] suppliers we need.'* The firm expects to double the number of employees in the future. This firm is also vertically integrated along its supply chain giving it access to fabric produced by a textile mill within its group. Approximately 80% of their fabric comes from the firm's own mill, with the remainder coming from COTONA (the textile mill in Madagascar) and China, Taiwan, and Indonesia. The parent company has been preparing for the effects of the end of the MFA for three years, and now feels competent to handle the new context. Simultaneously, the firm has focused on developing high levels of quality by employing quality control officers who are trained by the buyer and act on the buyers' behalf while the order is in production. This entire strategy has led to the firm being able to dictate prices to buyers and to operate at full production capacity. The result is that this firm has been able to move up the value chain from producing low-end, low-price garments to high quality, fashion-oriented garments.

In February 2005, a clustering organization called 'Text'Ile Mada' officially opened for business, intending to assist the firms in Madagascar upgrade and compete at a higher level

internationally. Supported with funds from the Centre for the Development of Enterprise (CDE) of the European Union, the objective is to foster a textile cluster similar to those found in Italy and France and help firms in Madagascar survive the intense competition expect after the end of the MFA. As one informant put it, the cluster hopes to limit vulnerability by acquiring new know-how and experience as members share their knowledge.

'Regarding the MFA, firms knew that there must be an industry-level response for 2005: we must organize. This was an element of motivation in creation the cluster: together we are strong.'

There are currently 17 members of the cluster, each with a different specialization - garment and lingerie manufacturers, industrial and manual embroidery firms, quality controllers, and a transport company (Zafimaharo 2005). This grouping of different firms allows the cluster members to offer a wider range of services.

'The objective of the cluster is to seize the opportunity to offer Madagascar as an alternative to China . . . We are relying on the quality of production and on [offering] services. That's our focal point.'

The variety of firms available in Madagascar is one of the advantages the cluster has, providing clients with a 'one-stop shop' at which they can order fabric and embroidery and different styles of garments. Since many orders are too large for smaller firms to manage, the cluster will coordinate production sharing amongst members.

'Some firms cannot offer more than 12,000 pieces of production capacity at a time. The cluster permits firms to share production capacity and access new opportunities in terms of orders'.

The cluster hopes to help members to access new markets with the expansion of production capacity (Zafimaharo 2005). Not only can the cluster obtain economies of scale on production, but also on transport. Already, the cluster has obtained a bulk discount of 25% on transport costs for members (Rambelo 2005b). The cluster also plans to organize workshops on production techniques, orders, and training costs among members. The cluster organizers hope that the sharing of knowledge between members will increase productivity. As members of the cluster have a maximum of 1000 employees; not all firms can take part. The organizers of the cluster believe that the larger firms would find it difficult to work with others due do differing needs. The cluster is hoping that the combination of extra services offered to clients, higher value-added and better quality garments produced within the cluster, and larger production capacity will attract buyers who would have otherwise filled their orders in China.

Conclusion

Our conclusions are grouped into general (pertaining to SSA clothing producers operating under the current context of globalisation, the end of the MFA, and AGOA) and Madagascar specific.

The most important general conclusion is that having access to preferential trade arrangements (as in AGOA) has played a crucial role for Madagascar. Hence the policy conclusion is that rules governing 'special and differential treatment' should be maintained and pursued with extreme vigour by SSA countries. Furthermore, specifically with respect to AGOA, the consequences of the transition from one stage to triple transformation set to occur in September 2007 need to be analysed with great care and special policy negotiations may be required to ensure that the negative effects are ameliorated.

The Madagascar case also throws up some interesting conclusions in respect of the operation of global clothing value chains. Clearly the final UA and EU market destinations may be subsumable under the generic rubric of buyer driven value chains, but there exist fundamental differences between them in respect of governance, upgrading and survival strategies. Finally

there is a further research issue that the Madagascar situation has revealed. Triangular manufacturing and third party coordination has been regarded as an integral aspect of the clothing value chain. However the Madagascar case implies that this may well be changing. What is unclear is whether this is a general shift post-MFA, a characteristic of the EU dominated value chain, or simply a specific result in Madagascar due to the fall out of the political crisis.

With respect to Madagascar specific conclusions, it is clear that the future of the industry is dependant on a host of infrastructural issues which tighten producer abilities to deal with falling unit prices and buyer demands. Madagascar lacks reliable service delivery of electricity and roads, while the cost for these services are rising. Yet there are many support measures that can be implemented to assist firms. Something as simple as a dual carriageway 300 kilometres long between the capital and the port would lessen the vulnerability of firms in Madagascar. Government is focusing its energies and resources on rural development while neglecting industrial development. Basic programs such as monetary support for capital investment or interest subsidies could help firms make important capital purchases that would help stabilize their position in the international clothing context. Government pressure on the port authorities could accelerate the clearance time at the port, saving manufacturers valuable time in the production process. With a little support firms can continue to operate and expand in Madagascar, facilitating the industrial development of the country.

REFERENCES

- American Textile Manufacturers Institute (2003). "The China Threat to World Textile and Clothing Trade", www.atmi.org
- Barboza, David and Elizabeth Becker (2005). "Free of Quota, China Textiles Flood the U.S." *New York Times* 1 April 2005, Section A, Page 1, Column 5
- Beware Beijing (2004). "Beware Beijing when its freed from quotas cage", unknown
- Comesa (2004), "Impact on COMESA's textiles exports under AGOA of the end of multilateral quotas under the Agreement on Textiles and Clothing: Can African textiles industry survive and grow in post ATC world?"
- COMTRADE (2003). Access to COMTRADE was provided through TIPS: <http://www.tips.org.za>
- De Jonquieres, G. (2004). "The textile revolution", Financial Times, London, UK.
- Dicken, P. (1998). *Global Shift: Transforming the World Economy*, Paul Chapman, London.
- Economist Intelligence Unit, (2004). "Africa consumer goods: Clothing Industry is Shrinking", American International Group.
- Flanagan, M. (2003). "Clothing Sourcing in the 21st Century, the 10 lessons so far", www.Just-Style.com
- Flanagan M, (2005). "Has quota abolition really been so bad?", just-style.com, 04 Jul 2005, www.Just-Style.com
- Gereffi, G and Memedovic, Olga (2003). "The Global Clothing Value Chain: What Prospects for Upgrading by Developing Countries", UNIDO, Vienna.
- Gibbon, P. (2002). "South Africa and the Global Commodity Chain for Clothing: Export Performance and Constraints", mimeo.
- Gibbon, P. (2003a). "AGOA, Lesotho's clothing miracle and the politics of sweatshops", *Review of African Political Economy* No.96.
- Gibbon, P. (2003b). "The African Growth and Opportunity Act and the global commodity chain for clothing", *World Development* Vol.31 (11).
- Kaplinsky, R, (2005). *Globalisation, Poverty and Inequality: Between a rock and a hard place*, Polity Press

- Minor, P.J., Velia, M. and Huges, J.K. (2002). "Assessing the potential for South African clothing exports to the United States and how the DTI and the South African clothing industry could best ensure that this is maximised", Research Report to the South African Department of Trade and Industry (DTI).
- Nordas, H. K. (2004). "The global textile and clothing industry post the Agreement on Textiles and Clothing" World Trade Organization Discussion Paper No. 5
- Rambelo, Didier (2005a). "5 entreprises franchises fermées." *Midi Madagasikara*. Saturday, 5 March 2005, vol 6562. 1 pg.
- Salinger, B. *et al* (1999). "Promoting the competitiveness of textiles and clothing manufacture in South Africa", African Economic Policy Discussion Paper 32.
- Salinger, Lynn (2003). "Competitiveness Audit of Madagascar's Cotton, Textiles, and Garments Sector." Report prepared for USAID/Madagascar by Nathan Associates, Inc.
- U.S. International Trade Commission (2004). "Textiles and Clothing: Assessment of the Competitiveness of Certain Foreign Suppliers to the U.S. Market", Volume I, Investigation No. 332-448.
- Zafimaharo, Nirina (2005). "Face à la concurrence internationale: Les entreprises textiles font bloc." *L'Express de Madagascar*. 1 April 2005, page 7.