Asia-Pacific Research and Training Network on Trade
Working Paper Series, No. 70, June 2009

Competitiveness of Nepalese ready-made garments after expiry of the Agreement on Textiles and Clothing

By

*Anil Belbase**
*Paras Kharel***

* Programme Director, Institute for Policy Research and Development (IPRAD), ** Senior Programme Officer, South Asia Watch on Trade, Economics & Environment (SAWTEE), Kathmandu, Nepal. This paper was prepared as part of the ARTNeT capacity development of research on trade and trade policy. The technical support of the United Nations Economic and Social Commission for Asia and the Pacific is gratefully acknowledged. The opinion, figures and estimates are the responsibility of the authors and should not be considered as reflecting the views or carrying the approval of the United Nations, ARTNeT, IPRAD and SAWTEE. The authors would like to thank Dr. Mia Mikic and Dr. Yann Duval for their comments and inputs. They would also like to thank Mr. Prashant Pokharel, President, Garment Association of Nepal (GAN), for his inputs and cooperation in the field study, and Mr. Matrika Dahal, staff of GAN, for conducting the field survey. Any remaining errors are the responsibility of the authors, who can be contacted at belbaseanil@gmail.com, kharelparas@yahoo.com.

Contents

Executive summary

The fierce competition in the global textiles and clothing (T&C) market unleashed by the expiry of the World Trade Organization's (WTO) Agreement on Textiles and Clothing (ATC) on 31 December 2004 has adversely affected Nepal's ready-made garment (RMG) industry, which ranks among the two top export products of the country.

While Nepal's RMG exports started declining after 2001 due to the combined effects of domestic conflict, the adverse international climate following the 9/11 attacks and the global abolition of T&C quotas covering major Nepalese RMG exports, the ATC expiry almost sounded the death knell for the country's RMG industry. RMG export earnings declined by a compound annual rate of 14.2 per cent between 2000 and 2007, and by 21.2 per cent from 2005 to 2007. In the United States of America market, earnings declined by 18.5 per cent and 28.4 per cent, respectively, during the two periods.

A revealed comparative advantage analysis shows that Nepal's RMG sector under Chapters 61 and 62 of the Harmonized Commodities Description and Coding System (HS) as well as the top 12 exports (for 2006) at the HS six-digit level continue to possess a comparative advantage in the post-ATC period in the United States market. However, the RMG sector as a whole as well as HS 61 and HS 62 products are under threat from increased competition in the United States market because the revealed comparative advantage (RCA) indices for the exports of the products have declined. The top three product lines – HS 620342, HS 620462 and HS 611020, representing more than 53 per cent of total RMG exports by Nepal – are also in the threatened category, as are the tenth- and eleventh-ranking product lines – HS 621142 and HS 610510. These results indicate that the ATC expiry has led to a deterioration in Nepal's competitiveness position in the United States market In contrast, HS 620630, 620452, 620520, 620920, 620292, 620640 and 611120 (ranking fourth to ninth, and twelfth, respectively, in Nepal's total RMG exports) appear to have remained competitively positioned even after the ATC expiry.

Likewise, the RMG industry as a whole as well as HS 61 and 62 taken separately have a lower comparative advantage in the post-ATC period compared with 1997-2000. The same holds true for the top product line, HS 620342, and for HS 621142 and HS 610510 – all three of which were found to be "threatened" when compared with the 2001-2004 period. Clearly, the competitiveness of HS 620342 has declined since the 1997-2000 period, after which the impact of the phasing out of global T&C quotas, coinciding with the intensification of domestic conflict, began to hit Nepal's RMG industry.

A small-scale survey of Nepal's RMG firms and interviews with key informants showed that the ATC expiry has adversely affected the country's RMG sector. The industry is finding it difficult to compete in the United States market. Firms rely completely on imports for raw materials – which are sourced mostly from India, followed by China. This raises costs compared with rival RMG-producing countries. RMG entrepreneurs believe that getting duty-free access to the United States market will increase exports to that destination. Export policy, tax incentives, the labour market, availability of skilled manpower, market access and availability of machinery are important factors affecting RMG exports. Export policy, labour market and tax incentives are identified as the three most important factors (in that order) that the government must address. Among trade, competition, tax and infrastructure/financial sector development policies, trade policy is considered the most important, followed by tax policy and infrastructure/financial sector development policy, and competition policy

The country's rigid labour law is identified as the most serious constraint on export competitiveness. Bad industrial and export policies, severe power cuts and poor infrastructure are other constraints. The possibility of Chinese investment in Nepal's RMG sector is considered low due to the differences in language and culture as well as the rigid labour law and poor infrastructure.

Introduction

A. Background

The world textiles trade was not regulated prior to the early 1960s. In 1961, a Short-term Arrangement (STA) in cotton textiles trade was reached under the General Agreement on Tariffs and Trade (GATT). This was followed in 1966 by a Long-term Arrangement (LTA) in international trade in cotton textiles, imposing percentage limits on imports of cotton products from developing countries. The regulation of global T&C trade became more precise with the implementation of the Multi-Fibre Arrangement (MFA) in January 1974. The MFA exempted textiles and clothing from GATT disciplines, allowing industrial countries to place bilateral quotas on imports of various textiles and garment product categories. The quota system was directed to protect the market of industrial countries so as to allow them to restructure and adapt to competition from cheaper imports from developing countries. The Uruguay Round of multilateral trade negotiations (1986-1994), which led to the establishment of WTO in 1995, brought about a change in T&C trade. In the process of negotiation, GATT contracting parties agreed that the MFA would be phased out with the implementation of the ATC. Accordingly, on 1 January 2005, the quota system was abolished, paving the way for more or less unrestricted global trade in T&C.

The export-oriented RMG industry has been one of the most successful industries in Nepal. Still in its formative years, the industry grew very rapidly in the 1980s and the 1990s, which were the two decades during which the country underwent sweeping transformations in its political, economic and social systems. When the Government of the United States imposed quotas on RMG imports from developing countries, Nepal became an attractive location for Indian exporters who started to invest in production in Nepal to meet their quota deficiencies and manufacture garments for the United States market (BM 1999). Before the inflow of Indian investment, Nepali industrialists had not realized the export potential of the RMG industry. The industry's significance stemmed from the speed of industry growth and the dynamism with which it was transformed into a sophisticated industry – unmatched by any other industry in Nepal.

According to the Garment Association of Nepal (GAN), the RMG industry in Nepal – which is the country's largest foreign currency earner – recorded a financial net worth of US$ 80 million and a collective turnover of US$ 160 million in 2002. The industry comprised about 212 factories, each employing from 200 to 1,500 workers, concentrated in two areas: the peripheries of the Kathmandu Valley and the industrial areas of the south-eastern district of Jhapa. The RMG industry contributed approximately 25 per cent of Nepal's total exports annually between 1991/92 and 1999/2000. The industry's contribution to national exports gradually increased after 1994/95 and reached a record 49 per cent in 1999/2000 before entering a downturn. During the peak year of 1994/95, the industry had 1,067 registered factories, with several more operating without official registration. The sector employed some 50,000 workers in 1999/2000, but in 2006 it was providing direct employment for only 4,450 people (ActionAid and SAWTEE, 2007). The share of women employees in the RMG sector varies with data sources. According to SAWTEE and ActionAid (2007), nearly 45 per cent of the employees were women, while according to the Census of Manufacturing Establishments conducted by the Central Bureau of Statistics, the proportion was 27 per cent in 2001.

The share of RMG exports in total national exports was 17.8 per cent in 2004, a year before the abolition of the quota regime, and 6.7 per cent in 2007. Similarly, the share of RMG exports to the United States was 13.4 per cent in 2004, but which decreased to about 4 per cent in 2007 (Trade and Export Promotion Centre, 2008). In addition to the widespread insurgency that was making it difficult to do business in Nepal, the gradual abolition of the global quota regime in T&C triggered a withdrawal of investment/capital by Indian investors, who had invested in the RMG sector in Nepal to exploit the quotas provided mainly by the United States to Nepal.

B. Research problem

Nepal's geography is a major constraint to realizing its trade potential, *ceteris paribus*. It is a landlocked country with a population of more than 25 million, on the southern slopes of the Himalayas, bordering China to the north and India in all other directions. The RMG industry in Nepal experienced rapid growth from the mid-1980s mainly due to the quota facility provided by the industrialized countries such as the United States. Capitalizing on the quota "rents", during 10 years the sector also became the biggest export-oriented manufacturing industry of the country (ActionAid and SAWTEE, 2007). In 1994/95, although the industry accounted for less than a 1 per cent share in the global RMG trade, its exports made up 29 per cent of the country's total exports.

However, the industry has been facing stiff competition in the global market since the phase-out of all T&C quotas from 1 January 2005 under the ATC. Exports have been falling steadily since 2000/01 except for a rebound in 2002/03. The share of RMG exports in the total exports plunged from 28.1 per cent in 1999/2000 to 6.7 per cent in 2006/07. Similarly, national total exports growth declined to negative (-1.4 per cent) in 2006/07 from 39.7 per cent in 1999/2000. The contribution of total national exports to gross domestic product (GDP) was 13.6 per cent in 1999/2000, declining to 8.2 per cent in 2006/07 (Ministry of Finance, 2007). The United States absorbed more than 80 per cent of Nepal's total RMG exports before the quota phase-out. Since the complete removal of quotas, Nepalese suppliers have been contending with the preferences granted by the United States to selected African and Caribbean countries. On the other hand, although Nepal does have duty- and quota-free access to the European Union market under the "Everything-But Arms" (EBA) scheme, it has not been able to fully exploit the preferential scheme to its advantage – despite the relaxation of standard European Union rules of origin – due to supply-side constraints.

The new trading environment offers opportunities to efficient suppliers of garments. Several RMG-exporting countries, such as Bangladesh, Cambodia and China, have capitalized on the freeing up of the global RMG trade. However, Nepal's RMG industry is hampered by a loss of competitiveness coinciding with the change in the international trading environment. A range cost-raising and productivity growth constraints exist, including the relatively high transaction costs of doing business in Nepal, labour regulations that constrain productivity growth, high transportation costs, and poor marketing networks (World Bank/Federation of Nepalese Chambers of Commerce and Industry, 2003).

An in-depth study is thus required in order to analyse Nepal's RMG competitiveness in the United States market – one of the largest RMG markets in the world – including following the termination of ATC, together with the factors that need to be addressed to enhance its competitiveness.

C. Research questions, the objective and structure of this paper

This paper examines the following research questions:

- What has been the export performance of the RMG industry in Nepal in the post-ATC period with a focus on the United States market?
- How has the expiry of the ATC impacted Nepal's competitiveness in RMG exports in the United States market?

The objective of the paper is:

- To review the status of Nepal’s RMG industry;
- To examine the impact of the ATC expiry on RMG exports by Nepal and the competitiveness of those exports; and
- To analyse production and export coherency issues from the trade competitiveness perspective.

The paper consists of six sections. Section I involves a literature review. The second section describes the methodology and data used. The third section presents an overview of the Nepalese RMG industry and its performance before and after ATC termination. The fourth section presents the findings of the RCA analysis. The fifth section presents the findings of a small-scale survey of RMG firms and key informant interviews. Section VI presents the conclusion.

I. Literature review

A. Impact of the Agreement on Textiles and Clothing expiry at the global level

The T&C sector is a major source of export earnings, government revenue and employment for most Asian countries. The elimination of T&C quotas due to the ATC expiry of the ATC has had a significant impact on the countries within the region. Due to their excessive reliance on the quota system and lack of preparedness to face a fully competitive trading environment in the post-quota period, some Asian countries have either experienced a significant loss or are in the process of losing their shares in the markets of developed countries (Adhikari, 2007). The post-quota phase has brought about some interesting trends in the movements of textiles and clothing products. The position of the European Union as the most favoured destination of T&C exports has been established, leaving the United States a long way behind (Nayak and Raout, undated).

Nordås (2004) concluded that the outcome of the phasing out of quotas would depend much more on prevailing tariff rates and preference margins of countries receiving such preferences than had been captured by conventional estimates. Further, she showed that the phasing out of quotas benefited China and India, enabling them to dominate world trade in T&C. Countries that are close to their major markets are likely to be less affected by competition from China and India. Both countries will gain market shares in the European Union, the United States and Canada to a significant extent, but the expected surge in market shares may be less than anticipated, as proximity to major markets assumes increasing economic significance while tariffs are increasingly restraining trade due to the fact that products cross borders several times.

A competitive analysis of Indian T&C exports to the European Union (Nayak and Raout, undated) showed that in the post-ATC period, the Indian T&C export basket was contracting in terms of product diversification and was focusing more on specialized items. Raihan and others (2007), in analysing the impact of ATC expiry on selected Asian LDCs, found that while temporary safeguards on China had provided breathing space for Bangladesh and Cambodia (the two have done much better than expected), and while the Lao People's Democratic Republic was holding on to its past gains, Nepal was losing ground.

B. Impact on Nepal

Shakya (2005) attributed the severe impact on the Nepalese RMG sector of quota phase-out to, among other things, insufficient commitments at the industry and policy levels to responding to the foreseen adjustment problems in trade without quotas. He argued that the industry's capacity to utilize quotas in only a few items before the ATC expiry as well as over-dependence on the United States market reflected its reluctance to go for product and market diversification as long as it had an easy and protected market access. The industry's initiative to cut output cost and raise delivery efficiency was largely restrained by lack of commitment to overcoming persistent internal bottlenecks. Steps were taken to convert the guaranteed market access in the United States into preferential market access at the last moment. However, no adequate efforts were made to compensate the market share loss in the United States by diverting export to preference-granting markets elsewhere. Neither the industry nor the Government of Nepal took any concrete measures to exploit the opportunities in the European Union and Canada, which offered preferential treatment coupled with relatively relaxed rules of origin for Nepalese apparel.

The working of market forces internationally brought about by the end of the quota regime has greatly influenced sourcing decisions, giving discretionary power to buyers. Consequently, the international buyers' priority has gone to countries having a massive scale of output and a capacity for vertical production – from fabric to fashion designing. The Nepalese garment industry lagged behind in both these factors determining international competitiveness. The downward spiral in world prices since the end of the quota regime is of serious concern for Nepal.

However, while the average price of select Nepalese products is 40 per cent higher than that of Chinese ones, it is still 40 per cent lower than the average price for the rest of the world, indicating some scope for the survival of the industry in the post-ATC era. The application of tariffs in the United States further eroded the price competitiveness of Nepalese apparel exports, which were already reeling under higher production and transaction costs. In addition, Nepal lost the level playing field after the United States provided duty-free access to clothing made in sub-Saharan countries, under the African Growth and Opportunity Act (AGOA).

Shakya (2005) suggested timely preparation for coping with non-tariff barriers, although they do not appear to be particularly serious at the moment; however, Nepal would do well to prepare itself for the possible adverse effects of measures such as the imposition of trade remedies, respect for intellectual rights, and compliance with eco-labelling and socio-labelling standards. A two-pronged strategy (with regard to market access) is suggested to adjust to the post-ATC trading environment: (a) intensified lobbying for preferential access to the United States market in order to gain a level playing field and offset increased output cost through duty advantage; and (b) intensified measures for utilizing the preferences in the

European Union and Canada to compensate for the immediate loss incurred in the United States market. Upgrading of technology, skills development of workers, a reduction in transaction costs, adequacy of trade support services, flexible labour and tax policies, and easy access to bank financing are suggested for overcoming internal constraints. A Garment Processing Zone (GPZ) will help improve competitiveness and ultimately achieve vertical production.

ActionAid and SAWTEE (2007), in assessing the impact of the T&C quota phase-out at the level of workers and manufacturers in Nepal, showed that although the quota phase-out under ATC began in 1995, its impact on the Nepalese economy was not immediate. This was because the RMG exports from Nepal concentrated on a few products (mainly cotton casual wear) and because these products were not under quota restrictions until the last phase of the Agreement. The RMG sector, in fact, continued to grow during the first five years of the quota phase-out, and the share of the RMG industry in the manufacturing sector rose from 26 per cent in 1994/95 to 37 per cent in 2000/01. Exports declined after 2001 due to the fallout from the 11 September 2001 terrorist attacks on the United States coupled with the increase in the number of RMG items on which quotas were lifted.

However, the impact after the complete removal of quotas on 31 December 2004 has been severe. While there were 1,067 RMG units in 1995, only 212 RMG units were in operation in 2000/01 and by 2006 that figure had fallen to just 30 operational units. In a survey (June-July 2006) of 26 manufacturing units, only four reported an increase in demand after January 2005, while 27 per cent of the surveyed units said they would survive without quotas. An adverse political climate, a lack of GPZs and the absence of duty-free access to the United States were identified as factors impeding growth of the RMG sector. When Nepal's RMG industry was at its peak, it provided direct employment to more than 50,000 people (Shakya, 2005) but during the 2006 survey, it was found that there had been a drastic reduction in employment. Only 4,450 people were found by the survey to be employed in the industry. Of the 274 workers interviewed, 23 per cent reported a decrease in earnings after 2004. The decrease in their earnings had not only restricted their ability to financially support their families but had also limited the scope of their families to spend on basic needs, including education of family members and debt repayments. In the case of 133 past RMG workers, 66 per cent cited that the closure of RMG manufacturing units left them jobless. About 60 per cent of the workers were able to find another job in less than a year, but for 11 per cent, it took three or more years. Among the workers who managed to get a job, 30 per cent reported an increase in income while 64 per cent reported a decrease in income. Workers with little or no education were among the hardest hit by the closure of the RMG manufacturing units.

With regard to product categories, exports to the United States were down in the five major categories – all cotton items. The losses were due to a surge in exports from Bangladesh, China, India, Pakistan, Sri Lanka and Viet Nam. Lower prices as well as increased demand for shorter lead times and higher quality clothing raised competition after the ATC expiry. Despite the decline in cotton item exports to both the United States and the European Union (indicating stiff competition in the lower-end cotton category after the ATC expiry), Nepal's RMG industry was able to retain its position in the European Union thanks to its established brand image in relatively high value woollen and silk shawls, scarves and veils. Manufacturers identified political climate, inadequacies of government policies related to trade, investment and industry, labour laws, transport costs and access to raw materials as the most pressing home-grown problems they faced, in that order. Asked to rank the external factors hindering their export potential, tariffs imposed by the importing countries were ranked the most important factor limiting exports, followed by increased competition in the absence of quotas, and the emergence of trading blocs that had managed to gain preferential access in the United States market.

The surveyed manufacturers believed that their exports would increase if they could gain duty-free access to the United States market and if rules of origin in the European Union were relaxed. The exporters predicted that their exports to the United States would increase by 66 per cent over their 2005 exports if they gained duty-free access to the United States market while their exports to the European Union would increase by 38 per cent. Moreover, using an econometric model, the study forecast that duty-free access to the United States market would lead to an 11.5 per cent increase in Nepalese RMG exports, *ceteris paribus*. ActionAid and SAWTEE (2007) did not carry out any RCA analysis.

According to Dahal (2006), a lack of backward integration and distance from a sea port were the two most important factors contributing to the reduced competitiveness of Nepal in this sector. He noted that other factors resulting in declining exports included low labour productivity, high transaction costs owing to inadequate transportation and logistics facilities, the high cost of compliance with customs procedures, and cumbersome administrative processes at ports.

Bossak and Nagasimha (1997) argued that competitiveness in the context of the garment industry in Nepal should mean improvement of quality and price competitiveness as these were the main means utilized by competing countries.

Pant and Pradhan (2002) pointed out that the garment industry in Nepal needed to do a great deal of homework on ensuring competitiveness in the world market by identifying both the competitive advantages and disadvantages. This requires identifying the main competitors, their present strengths and weaknesses, and the development of the Nepalese industry's own strategies.

C. Comparative performance of South Asian countries

The quota abolition has not affected all South Asian countries equally. After Maldives, Nepal was the biggest loser under the quota-free regime. Bangladesh and Sri Lanka, which were projected to lose out in the quota-free era, surprised the world by not only holding on to their past gains, but also by considerably improving their performance in the 18-month period after the quota phase-out (Adhikari and Weeratunge, 2006). Of the two, Bangladesh's performance has been spectacular by all counts. There are three explanations for Bangladesh's success: cheap labour (the cheapest in South Asia), thereby being able to benefit from re-imposition of quotas on China; support measures taken by the Government, especially targeting this sector; and devaluation of the country's currency, the taka.

A key driver of Sri Lankan exports is a strategic intervention, mainly from the private sector, with a conscious attempt to focus on high value niche products. The island nation has been able to secure a sustained increase in exports of niche apparel, i.e., women's underwear and brassieres. The efforts of a single firm to carve a global niche by penetrating even more lucrative markets – body armour, flak jackets and bullet-proof vests for troops in Saudi Arabia as well as the United Nations – show that the Sri Lankan private sector is on the constant lookout for creating niche products. Therefore, it is not surprising that Sri Lanka has the second lowest export concentration of T&C products only after India, suggesting that it has a well-diversified basket of exports in the T&C sector. Moreover, compliance with international labour and environmental standards has further benefited the country. Given the fact that creating a vertically integrated production structure in countries such as Bangladesh, Nepal and Sri Lanka is not feasible, the possibility of creating regional vertical integration to ensure a certain degree of specialization in countries within the region should be explored.

II. Methodology and data

An analytical and descriptive research design was utilized. The objectives were met in three steps. First, an overview of the Nepali RMG industry was carried out, utilizing secondary data with a comparative analysis of the industry's performance before and after ATC termination. Second, an RCA analysis was carried out to measure the competitiveness of Nepalese RMG in the post-ATC era in the United States market, as the largest market for Nepal's RMG exports. Finally, primary data were collected at two levels: (a) a small-scale survey of small and medium-sized RMG manufacturing firms; and (b) in-depth interviews with RMG entrepreneurs as key informants.

A. Overview of Nepal's ready-made garment industry

Secondary data from TEPC and GAN were utilized to analyse the performance of the industry in terms of the number of firms, employment, export (value and volume), and export destinations before and after ATC termination. Tables and charts depict the performance over a specific period.

B. Revealed comparative advantage analysis

The RCA analysis was carried out to measure the competitiveness of Nepalese RMG products in the post-ATC era in the United States market. A country's comparative advantage in a particular product, at a given point in time, depends on its pre-trade relative prices that rely on relative production costs. Data on these variables, in the presence of factor and product market distortions, are difficult to generate (Mahmood, 2004). However, comparative advantage can be approximated in an indirect way by using post-trade data that manifest post-trade relative prices and prevailing factor and product market distortions. The RCA approach, pioneered by Balassa (1965), is one of the few formal methodologies for measuring a country's comparative advantage and disadvantage in a particular industry. Moreover, RCA indices estimated across time can point to the general direction in which the pattern of comparative advantage is moving.

The standard RCA index is the ratio of the share of a country's total exports of the commodity of interest in its total exports to the share of world exports of the same commodity in total world exports (Mikic and Gilbert, 2007). Some previous studies in the Nepalese context have used similar methods (Maxwell, 1990; and Ministry of Industry, Commerce and Supplies, 2004). However, it should be noted that as the aim of the study reported here was to measure the competitiveness of Nepalese RMG in the United States market, the RCA index was adjusted so that the numerator was the share of Nepal's total exports of RMG (or a particular RMG product line) to the United States in the country's total exports to the United States, while the denominator was the share of world RMG exports to the United States (or a particular RMG product line) in total world exports to the United States. The standard multiplicative RCA index is:

$$RCA1i = (Xi, Nepal/SXNepal)/ (Xi, World/SXWorld) \quad (1)$$

where RCA1i = revealed comparative advantage in good i, Xi, Nepal = exports of good i to the United States by Nepal, SXNepal = total exports to the United States by Nepal, Xi, World = world exports of good i to the United States, and SXWorld = total world exports to the United States. If RCA1i > 1, then Nepal has a comparative advantage in good i, while if RCA1i < 1, then Nepal has a comparative disadvantage in good i.

However, the multiplicative RCA index is shown to have certain deficiencies: (a) the mean of the multiplicative RCA is not a meaningful concept; (b) the standard RCA index suggests that the "average sector" has a (net) comparative advantage against the expectation that the "average sector" would be neutral in terms of its RCA; (c) the mean becomes larger when more a more detailed sector classification is used; and (d) the distribution around the moving mean of the standard RCA is dependent on the number of countries and sectors distinguished (Hoen and Oosterhaven, undated). As most of these problems stem from the multiplicative specification of the RCA, an additive RCA has been proposed that has an even, bell-shaped distribution between -1 and +1 with a mean of zero that, by definition, is independent of the number and classification of the countries and sectors distinguished. The formulation of the additive RCA is:

$$RCA2i = (Xi, Nepal/SXNepal) - (Xi, World/SXWorld) \quad (2)$$

where RCA2i = revealed comparative advantage in good i, Xi, Nepal = exports of good i by Nepal to the United States, SXNepal = total exports by Nepal to the United States, Xi, World = world exports of goods i to the United States, and SXWorld = total world exports to the United States. Under additive RCA, if RCA2i > 0, then Nepal has a comparative advantage in good i while if RCAi < 0, then Nepal has a comparative disadvantage in good i.

Both multiplicative and additive RCA were calculated. Where the two indices yielded mutually inconsistent results, the additive RCA was considered in view of its superior properties. All the product lines studied were shown to exhibit revealed comparative advantage, so following Mahmood (2004), the RCA indices were also used to distinguish the product lines into two groups, viz., competitively positioned product lines and threatened product lines.[1]

1. Competitively positioned product lines

These product lines have RCAs greater than unity or zero and show consistent improvement over time owing to favourable external and internal conditions. The decision criteria used to select products under this category were:

(a) Average RCA index of a product line, "i", is > 1 or > 0 in 2005-2006; $(RCA1i)_{Average\ (2005\text{-}06)}>1$, or $(RCA2i)_{Average\ 2005\text{-}06}>0$; and

[1] Product lines having revealed comparative disadvantage can be categorized as 'emerging products' and 'weakly positioned products' (see Mahmood, 2004, for details).

(b) The difference between the average RCA index of product line “i” in 2005-2006 and the previous four years’ average is positive, i.e., $(RCAi)_{Average\ 2005\text{-}06} - (RCAi)_{Average\ 2001\text{-}2004} > 0$ (the same criterion applies for both RCA1 and RCA2).

2. Threatened product lines

These product lines have RCAs greater than unity or zero, but the indices are declining over time due to an adverse domestic environment and/or global competitive pressures. The decision principle to select products under this group is:

(a) $(RCA1i)_{Average\ 2005\text{-}06}>1$, or $(RCA2i)_{Average\ 2005\text{-}06}>0$; and

(b) $(RCAi)_{Average\ 2005\text{-}06} - (RCAi)_{Average\ 2001\text{-}2004} < 0$.

Additionally, to see how competitiveness has changed over a longer period, the competitiveness position of Nepalese RMG after the ATC expiry is compared with the industry’s competitiveness position during the period when its exports were booming, i.e., 1997-2000.

RMG exports were taken as exports under Chapters 61 and 62 minus woollen categories under HS Code 1996. This is consistent with the practice of TEPC under the Government of Nepal and GAN, the umbrella body of RMG manufacturers of Nepal, both of which exclude woollen items while calculating RMG exports. RCA is calculated at the level of Chapters 61 and 62, total RMG (Chapters 61 plus 62) as well as at the six-digit level of the top 12 export items (representing more than 89 per cent of total RMG exports) in 2006. For the sake of data consistency, all the data required for calculating RCA index were obtained from the United Nations Commodity Trade database (COMTRADE) through the World Integrated Trade Solution (WITS). The data set contains data for nine years (1996-2004) before the complete abolition of global quotas, and for two years (2005-2006) after the ATC expiry. RMG exports from Nepal and from the whole world to the United States, as obtained from COMTRADE, were mirror data, i.e., United States’ RMG imports from Nepal and from the whole world, respectively, as were data on Nepal’s total exports to the United States.

C. Survey

1. Survey of firms

A survey of small and medium-sized RMG firms in Kathmandu, the capital city, was conducted in order to compare their performance before and after the ATC expiry. The survey assessed the challenges faced by the Nepalese RMG industry and its prospects as well as the scope and/or possibility of Chinese investment in the sector. Data collection was through the administration of a short, semi-structured questionnaire. The process of selecting respondents was purposive.

2. Key informant interview

Key informant interviews were conducted in order to obtain the views of RMG entrepreneurs and stakeholders associated with GAN about the impact of the ATC expiry on the export performance and competitiveness of Nepalese RMG.

III. Overview of ready-made garment industry

A. Number of firms

According to GAN, the number of registered firms increased from 58 in 1982/83 to 757 in 1992/93. It was found from a separate source that the cumulative number of garment firms registered from 1991/92 to 1997/98 was 1,857 (*Business Management for Managers*, 1999). In 2001[2], there were more than 215 garment manufacturers but not all the registered garment firms were in operation (*The Kathmandu Post*, 2001). According to GAN, in financial year 2002 the operating firms numbered 95 (Pant and Pradhan 2002). In terms of scale of business, 10 were large, 25 were medium and 60 were small. However, the total number of firms comes down further to about 60 when only those firms operating on a fully-fledged basis are considered.

In 2004, the number of firms registered with GAN was 151. According to a GAN staff member, of the some 73 firms registered with GAN in 2006/07, only 10-12 firms were currently in operation. Firms still in operation were those that had been able to (a) expand, modernize and develop linkages directly with United States buyers, and (b) improve the quality of their products. This trend indicates that after the expiry of the ATC, there was a sharp decline in the number of manufacturing establishments. The different data sources make it difficult to construct a graph depicted such changes.

B. Employment

The closure of firms was accompanied by a sharp fall in employment in the RMG sector. While the sector provided direct employment to 50,000 people in 1999/2000, it directly employed only 4,450 people in 2006 (ActionAid and SAWTEE, 2007).

C. Export performance

The total export performance was generally on a rising trend up to 2001. It was in 1998/99 that the garment industry overtook the woollen carpet industry, to become the leading export industry of Nepal for the first time after more than a decade. In 2002, a sharp decline in exports was recorded. There was a rebound in 2003 but exports fell continuously thereafter (figure I).

However, the export figures differed according to the source. According to the Ministry of Finance (2000 and 2007), total RMG export earnings increased from NRs. 5,139.3 million in 1994/1995 to NRs. 13,942.4 million in 1999/2000 and NRs. 6,204.1 million in 2005/2006.

According to TEPC, which computed the export figure on the basis of actual garment items, the export figure declined from NRs. 5,756.5 million in 1993/94 to NRs. 5,357 million in 1994/95, followed by growth to reach NRs. 11,500.2 million in 1999/2000. A slight decline of 4 per cent in the export figure to NRs. 11,030.7 million was recorded in 2000/01 followed

[2] Note: Where a single year date is given, this refers to the financial year,

by steep falls of 33.7 per cent, 14.4 per cent and 27.5 per cent in 2004/05, 2005/06 and 2006/07, respectively.

The average annual growth rate (i.e., compound growth rate) in export earnings was 1.6 per cent in the past 16 years (1991/92 to 2006/07) (table 1). However, the average annual growth in export volume was negative 2.6 per cent in the same period, a decrease from 25.3 million pieces in 1991/92 to 17.2 million pieces in 2006/07. The total export earnings increased by more than three times (an increment of 254 per cent), while the total volume increased by only 61 per cent from 1991/92 to 2000/01. But in the 16 years from 1991/92 to 2006/07, the total export earnings increased by just 26.8 per cent, whereas the total volume decreased by 32.21 per cent. The high annual growth in earnings from 1991/92 to 2000/01 is largely attributed to the appreciation of the United States dollar. The changing fortunes of the Nepalese RMG industry is illustrated by the fact that while export earnings grew at an annual rate of 15.1 percent during 1992-2001, they declined at an annual rate of 14.2 percent during 2000-2007. Moreover, the present export earnings are also largely attributed to the export performance of a few large garment manufacturing units currently operating in Nepal.

Table 1. Export performance of the garment industry of Nepal in the United States and rest of the world markets

Financial year	Export value (NRs. million)			Growth rate			Export volume (million pieces)			Growth rate		
	Total	United States	Others	Total	United States	Others	Total	United States	Others	Total	United States	Others
1992	3 112.0	2 897.9	214.1				25.3	23.4	1.9			
1993	3 723.4	3 258.3	465.1	19.6	12.4	117.2	22.8	19.2	3.6	-9.9	-17.9	89.5
1994	5 756.4	5 216.4	540.0	54.6	60.1	16.1	41.0	36.0	5.0	79.8	87.5	38.9
1995	5 357.0	4 636.6	720.4	-6.9	-11.1	33.4	33.5	26.9	6.6	-18.3	-25.3	32.0
1996	5 414.7	4 671.1	743.6	1.1	0.7	3.2	28.0	22.5	5.5	-16.4	-16.4	-16.7
1997	5 617.5	4 692.7	924.8	3.7	0.5	24.4	30.0	22.3	7.7	7.1	-0.9	40.0
1998	6 783.0	5 626.0	1 157.0	20.7	19.9	25.1	35.0	24.9	10.1	16.7	11.7	31.2
1999	8 368.2	6 425.6	1 942.6	23.4	14.2	67.9	37.7	27.2	10.5	7.7	9.2	4.0
2000	11 500.2	10 646.3	8 539.0	37.4	65.7	-56.0	42.5	42.5	na	12.7	56.3	-
2001	11 030.7	9 595.4	1 435.3	-4.1	-9.9	68.1	40.7	35.8	4.9	-4.2	-15.8	-
2002	na	na	na	-	-	-	na	na	na	-	-	
2003	11 624.3	10 361.0	1 263.3	-	-	-	45.9	37.4	8.5	-	-	-
2004	9 592.6	7 507.1	2 085.6	-17.5	-27.5	65.1	39.0	28.0	11.0	-15.0	-25.1	29.7
2005	6 355.5	4 960.8	1 394.8	-33.7	-33.9	-33.1	27.0	18.3	8.7	-30.9	-34.6	-21.4
2006	5 443.0	3 856.9	1 586.2	-14.4	-22.3	13.7	25.2	13.2	12.0	-6.5	-28.0	38.9
2007	3 947.4	2 545.9	1 401.6	-27.5	-34.0	-11.6	17.2	7.6	9.5	-32.0	-42.1	-20.9
Growth rate compound												
1992-2001	15.1	14.2	23.5				5.4	4.8	11.1			
1995-2005	1.72	0.7	6.9				-2.15	-3.8	2.8			
2000-2007	-14.2	-18.5	7.3				-12.2	-21.8				
2005-2007	-21.2	-28.4	0.2				-20.2	-35.4	4.8			
1992-2007	1.6	-0.9	13.3				-2.6	-7.2	11.3			

Source: Trade and Export Promotion Centre, Kathmandu.
Note: na = not available.

D. Market concentration

Since 1983, the main export items have varied. However, RMG exports from Nepal continue to be concentrated in the United States market. There were a total of 12 quota categories covering both cotton and rayon products before the termination of the ATC.

Table 2 shows that in 10 of the past 16 years, more than 80 per cent of total RMG exports went to the United States. Before the expiry of the ATC, the share of the United States market in the total RMG export value of Nepal fell below 80 per cent during only two years (76.8 per cent in 1999 and 78.3 per cent in 2004). However, after the expiry of the ATC, it has remained below 80 per cent and was only 64.5 per cent in 2007. On the other hand, the share of export volume in the United States market came down from 88 per cent in 2001 to 44.5 per cent in 2007. In absolute terms, the export earnings from the United States market increased from NRs. 2,898 million in 1991/92 to NRs. 9,595.4 million in 2000/01, after which the earnings declined steadily to NRs. 3,947.5 million in 2006/07. Likewise, the volume of export to the United States market also increased from 23.4 million pieces in 1991/92 to 37.4 million pieces in 2002/03, but then decreased to 7.6 million pieces in 2006/07.

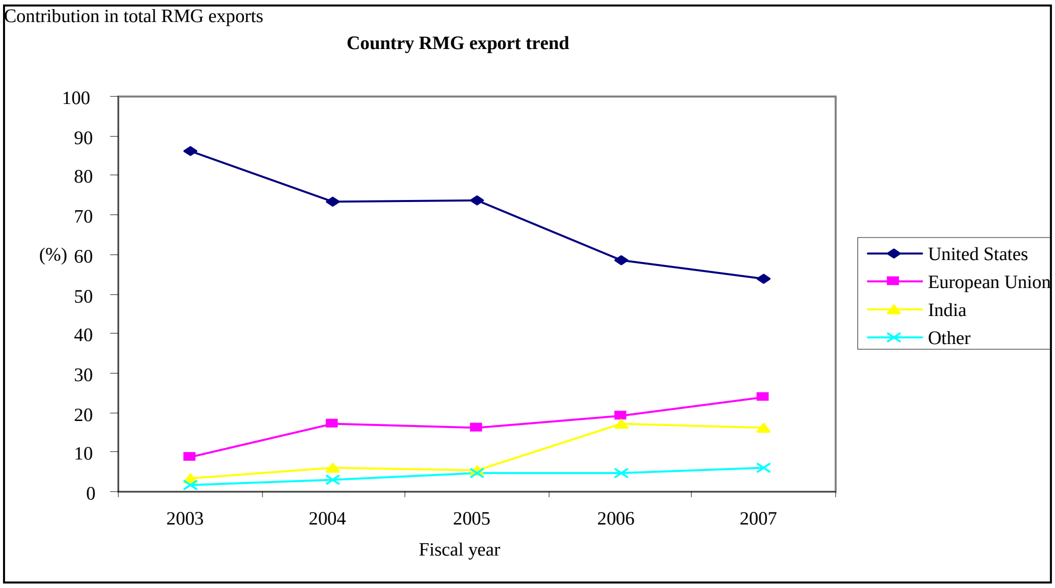
Table 2. Share of total RMG exports by Nepal in the United States market

	Export value (NRs. million)			Export volume (million pieces)		
Financial year	**Total**	**United States**	**Share (%)**	**Total**	**United States**	**Share (%)**
1992	3 112.00	2 897.9	93.1	25.3	23.4	92.5
1993	3 723.40	3 258.3	87.5	22.8	19.2	84.2
1994	5 756.40	5 216.4	90.6	41.0	36.0	87.8
1995	5 357.00	4 636.6	86.6	33.5	26.9	80.3
1996	5 414.70	4 671.1	86.3	28.0	22.5	80.4
1997	5 617.50	4 692.7	83.5	30.0	22.3	74.3
1998	6 783.00	5 626.0	82.9	35.0	24.9	71.1
1999	8 368.20	6 425.6	76.8	37.7	27.2	72.1
2000	11 500.20	10 646.3	92.6	na	42.5	-
2001	11 030.70	9 595.4	87.0	40.7	35.8	88.0
2002	na	na	-	na	na	-
2003	11 624.354	10 361.0	89.1	45.9	37.4	81.5
2004	9 592.690	7 507.1	78.3	39.0	28.0	71.7
2005	6 355.589	4 960.8	78.1	27.0	18.3	67.8
2006	5 443.088	3 856.9	70.9	25.2	13.2	52.2
2007	3 947.490	2 545.9	64.5	17.2	7.6	44.5

Source: Trade and Export Promotion Centre, Nepal**.**
Note: na = not available.

Figure I shows that the share of the United States market in total export earnings decreased from 2003 to 2007. After the expiry of the ATC in 2005, it declined sharply, whereas the share of exports to the European Union and India increased from 9 per cent in 2003 to about to 22 per cent in 2007, and from 5 per cent in 2003 to 18 per cent in 2007, respectively

Figure I. Country-wise RMG export trends



Source: Trade and Export Promotion Centre, Lalitpur, Nepal.
Note: European Union includes France, Germany, the United Kingdom, Spain and Italy. Other includes: Japan and Canada.

Table 3 shows that the United States recorded a 20.4 per cent share of Nepal's total national exports in 2003, which then decreased continuously, reaching 3.9 per cent in 2007. Similarly, the RMG export share in total exports also decreased from 23.2 per cent in 2003 to 6.7 per cent in 2007. In contrast, the shares of France and Canada showed an increasing trend whereas those of other countries generally declined between 2003 and 2007.

Table 3. Country shares in total national RMG exports

(Unit: %)

Country	**2003**	**2004**	**2005**	**2006**	**2007**
United States	20.4	13.4	8.1	6.1	3.9
France	0.5	0.6	0.5	0.7	0.6
Germany	0.5	1.0	0.2	0.4	0.4
United Kingdom	0.7	1.0	0.6	0.5	0.3
Canada	0.2	0.4	0.4	0.4	0.3
Spain	0.2	0.2	0.2	0.2	0.2
Japan	0.2	0.2	0.2	0.1	0.1
Italy	0.3	0.4	0.2	0.3	0.1
Total RMG exports	23.2	17.8	10.9	9.1	6.7

Source: Trade and Export Promotion Centre, Nepal.

IV. Empirical findings of revealed comparative advantage analysis

A. Empirical findings

The RCA analysis (table 4) showed that the RMG sector as a whole (HS Chapters 61 and 62 together), the two chapters individually as well as the top 12 exports (for 2006) at the HS six-digit level continued to possess a comparative advantage in the post-ATC period. Both multiplicative and additive RCA indices (RCA1 and RCA2, respectively) show that the sector/product lines exhibited a revealed comparative advantage. However, as indicated by the negative sign in column 5 (the difference between average RCA for 2005-2006 and average RCA for 2001-2004), the RMG sector as a whole as well as HS 61 and HS 62 fall within the threatened category (i.e., the RCA indices for them are declining). The top three product lines – HS 620342, HS 620462 and HS 611020, representing more than 53 per cent of total RMG exports by Nepal – are also in the threatened category, as are the tenth and eleventh ranking product lines, HS 621142 and HS 610510.[3] These results indicate that the expiry of the ATC has led to deterioration in Nepal's competitiveness position in the United States market.

In contrast, HS 620630, 620452, 620520, 620920, 620292, 620640 and 611120 (ranked fourth to ninth, and twelfth in Nepal's total RMG exports) appear to have remained competitively positioned even after the ATC expiry.[4]

Table 4 also shows the competitiveness position of Nepal's RMG industry after the ATC expiry vis-à-vis 1997-2000. As indicated in column 6 of the table, RMG as a whole as well as HS 61 and 62 had a lower comparative advantage in the post-ATC period compared with 1997-2000. The same holds true for the top product line HS 620342 as well as for HS 621142 and HS 610510, all three of which were found above to be "threatened" when compared with 2001-2004. However, the other product lines earlier found to be "threatened" (HS 620462 and 611020, which were second- and third-ranking in export value) showed a higher comparative advantage in the post-ATC period compared with 1997-2000. One thing is clear – the competitiveness of the top product line, HS 620342, has declined steadily since the 1997-2000 period, after which the impact of the phase-out of global T&C quotas, coinciding with the intensification of domestic conflict, began to hit Nepal's RMG industry.

With regard to the seven product lines earlier found to be "competitively positioned", five showed higher comparative advantage in the post-ATC period compared with 1997-2000, while the remaining two showed lower comparative advantage.

Table 4. RCA of Nepal's RMG and 12 product lines in the United States market

	Average 2001-2004	**Average 2005-2006**	**Average 1997-2000**	**Difference 1 (2005-2006 over 2001-2004)**	**Difference 2 (2005-2006 over 1997-2000)**
HS 61					
RCA 1	8.5435	4.4187	5.4182	-4.1249	-0.9995
RCA 2	0.1940	0.0760	0.1130	-0.1180	-0.0370
HS 62					
RCA 1	16.8512	16.4824	17.9768	-0.3688	-1.4944
RCA 2	0.4511	0.3691	0.5432	-0.0820	-0.1741
RMG					
RCA 1	12.9148	10.6604	12.3571	-2.2543	-1.6966
RCA 2	0.6451	0.4452	0.6562	-0.1999	-0.2110
620342					
RCA 1	31.5004	35.3511	31.2840	3.8507	4.0671

[3] In the case of HS 620342 and HS 621142, RCA 1 indicates increasing RCA while RCA 2 shows decreasing RCA. However, as stated in section II (methodology sub-section), when RCA1 and RCA2 produce mutually inconsistent results, RCA 2 will be considered in view of its superior properties.

[4] In the case of HS 620452, while RCA1 shows falling comparative advantage, RCA 2 shows a rising comparative advantage. However, RCA 2 is considered for the same reasons as in footnote 2.

RCA 2	0.1301	0.1189	0.1509	-0.0112	-0.0320
620462					
RCA 1	27.5416	21.5683	18.6771	-5.9733	2.8912
RCA 2	0.1249	0.0823	0.0766	-0.0426	0.0057
611020					
RCA 1	19.0006	9.9682	8.9971	-9.0324	0.9711
RCA 2	0.1079	0.0476	0.0382	-0.0603	0.0095
620630					
RCA 1	30.9278	41.3490	45.7665	10.4212	-4.4176
RCA 2	0.0347	0.0404	0.0581	0.0057	-0.0177
620452					
RCA 1	37.4531	34.8520	29.8975	-2.6011	4.9545
RCA 2	0.0189	0.0235	0.0098	0.0046	0.0137
620520					
RCA 1	12.5996	20.0575	38.2050	7.4579	-18.1476
RCA 2	0.0233	0.0330	0.1077	0.0097	-0.0747
620920					
RCA 1	26.8514	57.9176	20.9524	31.0662	36.9652
RCA 2	0.0101	0.0190	0.0073	0.0088	0.0117
620292					
RCA 1	17.0115	33.9958	19.5576	16.9843	14.4382
RCA 2	0.0031	0.0092	0.0044	0.0061	0.0048
620640					
RCA 1	13.0605	22.0259	2.4051	8.9654	19.6208
RCA 2	0.0079	0.0097	0.0012	0.0018	0.0085
621142					
RCA 1	54.6004	55.3056	44.0091	0.7052	11.2965
RCA 2	0.0146	0.0121	0.0176	-0.0025	-0.0055
610510					
RCA 1	26.3117	10.7207	23.6213	-15.5910	-12.9007
RCA 2	0.0315	0.0111	0.0499	-0.0205	-0.0389
611120					
RCA 1	1.2163	7.1465	1.5060	5.9302	5.6405
RCA 2	0.0002	0.0056	0.0006	0.0054	0.0050

Note: RCA1 – Multiplicative RCA; RCA2 – Additive RCA.

B. Limitations of revealed comparative advantage

It must be noted, however, that the RCA analysis has its limitations. RCA measures comparative advantage in an indirect way by using post-trade data that manifest post-trade relative prices as well as prevailing factor and product market distortions. Hence, a major limitation of RCA is that it is affected by anything that distorts trade (Mikic and Gilbert, 2007). Still, given the fact that pre-trade relative prices that rely on relative production costs cannot be generated, despite the limitation, RCA does give a rough indication of comparative advantage and so is a widely used tool in this regard.

V. Perception survey on ready-made garment exports and competitiveness

A. Survey methodology

Primary information was collected through a small-scale survey of nine small and medium-sized RMG firms, and through key informant interviews with four executive board members of GAN (annex I), in order to obtain the views of RMG entrepreneurs about the impact of the ATC expiry on the export performance and competitiveness of Nepal's RMG industry. An attempt was made to identify the potentiality of RMG exports after the ATC expiry. A structured questionnaire with mostly close-ended questions and a few open-ended questions was given to the selected stakeholders (annex II). The survey instrument was developed in coordination/consultation with the ARTNeT Secretariat. The selection of the firms was done purposively, in consultation with GAN, as barely a dozen RMG firms were still in operation; in addition, the firms' owners, reeling under labour agitation, were reluctant to field questions due to concern that their answers could be used against them by unionists.

B. Ownership structure

In terms of ownership structure, five of the surveyed RMG firms were established under single ownership whereas four were established under partnership (table 5). Seven of the firms were established before the ATC expiry and two were established after the ATC expiry. This indicates that the ATC expiry discouraged investment in the RMG sector.

In terms of ownership by gender, only one firm had a female owner; the rest (eight) were owned by men (table 6.).

Table 5. Types of ownership by investment pattern

	Number	Percentage
Single	5	55.6
Partnership	4	44.4
Total	9	100.0

Source: Field Survey, 2008.

Table 6. Ownership by gender

	Number	Percentage
Male	8	88.9
Female	1	11.1
Total	9	100.0

Source: Field Survey, 2008.

C. Knowledge about the Agreement on Textiles and Clothing

When asked about knowledge regarding the ATC expiry, all the respondents in the survey of the firms as well as in the key informant interviews said they knew about it. However, some of them thought it referred to the phase-out of quotas on RMG imports in the United States rather than removal of global quotas on T&C including RMG under the World Trade Organization.

D. Main market for Nepal's ready-made garments before and after the ATC expiry

The survey of firms showed that while the United States was the first market for seven of the nine firms surveyed before the ATC expiry, it was so for six firms after the ATC expiry (table 7). However, while India was the first and second market for one firm each, and third for two firms before the ATC expiry, it subsequently became first for two firms and third for one firm. All four key informants said the United States was their first market both before and after the ATC expiry, although after the expiry, India, the European Union and Canada emerged as alternative markets (table 8).

Table 7. International markets for Nepalese RMG (firm-level survey)

	Pre-ATC expiry, 2004			Post-ATC expiry, 2008		
	First	**Second**	**Third**	**First**	**Second**	**Third**
United States	7	2		6		
European Union	1	2		1	2	
Canada		2			2	1
India	1	1	2	2	2	1
No response		2	7		3	7

Source: Field Survey, 2008.

Table 8. International markets for Nepal's RMG (key informants' views)

	Pre-ATC expiry, 2004			Post-ATC expiry, 2008		
	First	**Second**	**Third**	**First**	**Second**	**Third**
United States	4		-	4		
European Union		4	-		4	
Canada			-			2
India			-			2

Source: Field Survey, 2008.

E. Profitability and source of raw material imports

The survey showed that five firms were profitable, with four of the firms having a profit rate of 1.5 per cent and the fifth firm having a profit rate of 2.5 per cent; four firms recorded losses. The key informants also said that most of the RMG small and medium-sized firms in Nepal were recording losses and therefore the few RMG firms that were still in operation were on the verge of closure.

Eight firms were found to source at least 50 per cent of their raw materials from India while only one firm imported at least 50 per cent of its raw materials from China. Other sources for raw materials, although the imports were in limited amounts, were: Hong Kong, China; Taiwan Province of China; Singapore; and Thailand, plus two South Asian countries, Bangladesh and Pakistan. All firms cited unavailability of raw materials domestically as the reason for using imported raw materials in production.

F. Competition, market access and survival of small and medium-sized enterprises in the ready-made garment sector

The survey results showed that competition in the international market for RMG products had intensified in the post-ATC period. Of the nine firms surveyed, seven (77.8 per cent) said that competition had increased, while two firms (22.2 per cent) answered otherwise. All four respondents in the key informant interviews said that the competition in the international market had increased after the ATC expiry.

Asked if Nepal's RMG firms could continue to survive in the post-ATC era, five firms said yes while four said no. All four key informants replied in the negative. Only one firm said it had taken measures to cope with the increased competition unleashed by the ATC expiry in the global market; the other firms said they had not taken any measures. The key informants were unanimous in their view that the Government of Nepal was not serious about the hardships faced by the country's RMG industry and had not taken any measures to tide them over.

Most of the firms said their exports to the United States would increase if the United States granted duty-free access to Nepalese RMG products. The key informants held the same view.

G. Impact of the Agreement on Textiles and Clothing expiry on other aspects of the business

Three of the nine surveyed firms said their productive capacity had improved after ATC expiry, four said it had fallen while two said it was the same. Five firms said overtime and outsourced work had been reduced after the ATC expiry while four said there had been no change. Four firms said employee benefits had improved whereas one firm said there had been no change. However, the key informant interviews showed that productivity capacity had improved after the ATC expiry while overtime and outsourced work remained the same. With regard to employee benefits, three key informants said they had seen no change while one had seen improvement.

H. Factors affecting ready-made garment exports

The majority of respondents in the survey considered export policy, tax incentives, labour market, availability of skilled manpower, market access and availability of machinery to be important factors affecting exports by Nepal's RMG industry. The surveyed firms considered export policy to be the most important (score 5) (table 9). Tax incentives, labour market, availability of skilled manpower, market access and availability of machinery goods were seen as very important (score 4). Standard deviation of the scores shows that the view of the importance of export policy is uniform (with a standard deviation of zero). Standard deviations ranging from 0.4 to 1 for the other factors also reflect considerable uniformity in the views of the respondents.

Table 9. Factors affecting RMG exports (firms)

Policies	Average score (out of 5)	Standard deviation
Export policy	5.0	0.0
Availability of skilled manpower	4.8	0.4
Market access	4.8	0.4
Tax incentives	4.7	1.0
Labour market	4.6	0.8
Availability of machinery goods	4.2	0.6

Source: Field Survey, 2008.
Note: 1= not important, 2 = somewhat important, 3 = important, 4 = very important, 5 = most important.

In the key informant interviews, respondents viewed export policy (score 4.8), labour market (score 4.3), market access (score 4.3) and availability of machinery goods (4.0) as very important while tax incentives (score 3.3) and availability of skilled manpower (3.8) were only considered to be important (table 10). The standard deviation calculation shows uniformity in the answers on the availability of machinery goods and low deviation in the views on the other factors. There is some difference in the results from the firm survey and key informant interview.

At the firm level, the respondents considered export policy to be most important (score 5) but in the key informant interviews it was considered to be very important (score 4.8). Similarly, while for the key informants, skilled manpower and tax incentives were only seen as important, for firms these factors were very important factors affecting exports of RMG products. This suggests a slight difference of opinion between owners of RMG firms and executive members of GAN.

Table 10. Factors affecting RMG exports (key informants)

Policies	Average score (out of 5)	Standard deviation
Export policy	4.8	0.5
Labour market	4.3	0.5
Market access	4.3	0.5
Availability of machinery goods	4.0	0.0
Availability of skilled manpower	3.8	0.5
Tax incentives	3.3	0.5

Source: Field Survey, 2008.
Note: 1= not important, 2 = somewhat important, 3 = important, 4 = very important, 5 = most important.

Asked to identify the three most important factors listed above that should be addressed by the Government in order to enhance Nepal's RMG competitiveness in the global market, six firm-level respondents gave first priority to export policy (table 11), while one respondent gave first priority to availability of skilled manpower and the remainder did not respond. Similarly, under the second priority, four firms cited the labour market, one each identified government export policy, tax incentives and market access, and two did not respond. Likewise, five firms ranked tax incentives as third priority, one each gave third priority to the labour market and market access, and two did not respond. In the case of the key informant interviews, three respondents gave first priority to government export policy and one to the labour market (table 12). Three key informants gave second priority to the labour market while one cited government export policy; all four gave third priority to tax incentives. The firm-level and key informants' views matched.

Table 11. Priority over factors to be addressed by government to enhance RMG competitiveness (firms)

Policies	Importance		
	First priority	**Second priority**	**Third priority**
Export policy	6	1	
Tax incentives		1	5
Labour market		4	1
Availability of skilled manpower	1		
Market access		1	1
Availability of machinery goods			
No responses	2	2	2

Source: Field Survey, 2008.

Table 12. Priority over factors to be addressed by government to enhance RMG competitiveness (key informants)

Policies	Importance		
	First priority	**Second priority**	**Third priority**
Export policy	3	1	
Tax incentives			4
Labour market	1	3	
Availability of skilled manpower			
Market access			
Availability of machinery goods			

Source: Field Survey, 2008.

I. Importance of different policies regarding competitiveness

Entrepreneurs were also asked to rank four policies (trade, competition, tax, and infrastructure and financial sector development) in terms of their importance in enhancing the competitiveness of Nepal's RMG industry. The majority of respondents in the firm-level survey considered trade policies such as tariffs, policies related to import and export of production; and customs procedures as most important (table 13). The average score derived for trade policy is 5. This is followed by tax policy (4.7). Infrastructure and financial sector development received a score of 4.5. Competition policy obtained the lowest score (4). The key informant survey also supported the firm survey results with trade policy receiving the highest score of 4.3, followed by tax policy; and infrastructure and financial sector development (4.2 each) and competition policy (3.7) (table 14).

Table 13. Importance of policies regarding competitiveness (for firms)

Factors	Average score (out of 5)	Standard deviation
Trade policy (policies related to import and export of production, such as tariffs and customs procedure)	5.0	0.0
Tax policy (level of the tax burden and tax design of tax policy, including the way it is administered, directly influencing business costs and returns on investment)	4.7	0.6
Infrastructure and financial sector development (lack of infrastructure and/or a stable financial sector may impede the realization of investment)	4.5	0.7
Competition policy (helps to ensure that companies operate in more competitive markets)	4.0	1.0

Source: Field Survey, 2008.
Note: 1= not important, 2 = somewhat important, 3 = important, 4 = very important, 5 = most important.

Table 14. Importance of policies regarding competitiveness (for key informants)

Factors	Average score (out of 5)	Standard deviation
Trade policy (policies related to import and export of production, such as tariffs and customs procedure)	4.3	0.5
Tax policy (level of the tax burden and tax design of tax policy, including the way it is administered, directly influencing business costs and returns on investment)	4.2	0.5
Infrastructure and financial sector development (lack of infrastructure and/or a stable financial sector may impede the realization of investment)	4.2	0.5
Competition policy (helps to ensure that companies operate in more competitive markets)	3.7	0.5

Source: Field Survey, 2008.
Note: 1= not important, 2 = somewhat important, 3 = important, 4 = very important, 5 = most important.

J. Constraints on ready-made garment export competitiveness

Asked about the constraints on export competitiveness, there were no responses from the firms. However, in the key informant interviews, the respondents indicated that there were many constraints on competitiveness. The major constraints identified were highly inflexible labour law/policy, unconducive industrial and export policies, severe power cuts and poor infrastructure. They suggested that the labour law needed to be made flexible, giving investors the right to hire and fire depending on demand conditions, and that the industrial and export policies should be made investor friendly. In order to enable Nepal's RMG manufacturers to compete in the international market – where competition has toughened following the ATC expiry and is expected to intensify further – they suggested that the Government provide facilities and incentives to them. They stressed that introducing flexibility into the labour law would go a long way towards enhancing the competitiveness of Nepal's RMG industry.

K. Possibility of Chinese investment in Nepal’s ready-made garment sector

When asked about the possibility of Chinese investment in the Nepalese RMG sector, three of the four key informants replied that due to differences in culture and language, the possibility of Chinese investment in Nepal was low. In the past there had been a couple of Nepalese RMG firms with Chinese investment, but they pulled out after two to three years. The Chinese are investing in the RMG sector in Cambodia, the Lao People’s Democratic Republic and Viet Nam, with which they have cultural and lingual affinities. However, one key informant argued that the rigid labour law and poor infrastructure were major deterrents to Chinese investment in the RMG sector in Nepal.

VI. Conclusion

The fierce competition in the global T&C market after the termination of the ATC has severely affected Nepal’s RMG industry, which ranks among the two top merchandise export products of the country.

While Nepal RMG exports started declining after 2001, due to the combined effects of domestic conflict, the adverse international climate following the 9/11 attacks in the United States and the global abolition of T&C quotas covering major RMG products exported by Nepal, the ATC expiry dealt a hard blow to Nepal’s RMG industry. RMG export earnings declined by a compound annual rate of 14.2 per cent during 2000-2007 and by 21.2 per cent during 2005-2007. In the United States market, earnings declined by 18.5 per cent and 28.4 per cent in the same periods, respectively. Prior to the expiry of the ATC, during only two years the share of the United States market in the total RMG export value of However, since the expiry of the ATC, it has remained below 80 per cent – reaching a low of 64.5 per cent in 2007. On the other hand, the share of export volume in the United States market declined from 88 per cent in 2001 to 44.5 per cent in 2007. Likewise, the share of RMG exports in Nepal’s total merchandise exports fell from 23.2 per cent in 2003 to just 6.7 per cent in 2007.

The RCA analysis has shown that the product lines at the two-digit level (HS 61 and 62) as well as the top 12 exports (for 2006) at the six-digit level have continued to possess a comparative advantage in the post-ATC period in the United States market. However, Nepal’s RMG sector as a whole as well as HS 61 and HS 62 are under threat from increased competition in the United States market as indicated by the fall in their RCA indices. The top three product lines – HS 620342, HS 620462 and HS 611020, representing more than 53 per cent of total RMG exports by Nepal – are also in the “threatened” category, as are the tenth and eleventh ranking product lines – HS 621142 and HS 610510. These results indicate that the expiry of the ATC has led to deterioration in Nepal’s competitiveness position in the United States market. In contrast, HS 620630, 620452, 620520, 620920, 620292, 620640 and 611120 (ranking fourth to ninth, and twelfth in Nepal’s total RMG exports) appear to be competitively positioned even after the ATC expiry.

Likewise, ready-made garments as a whole as well as HS 61 and 62 taken separately have a lower comparative advantage in the post-ATC period compared with 1997-2000. The same holds true for the top product line, HS 620342 as well as for HS 621142 and HS 610510 – all three of which were found to be “threatened” when compared with the 2001-2004 period. However, the other product lines earlier found to be “threatened” (HS 620462 and 611020 – second- and third-ranking in export value) showed a higher comparative advantage in the post-ATC period compared with 1997-2000. One thing is clear – the competitiveness of the top product line, HS 620342, has declined over the years since the 1997-2000 period, after which the impact of the phase-out of global T&C quotas, coinciding with the intensification of domestic conflict, began to adversely affect the Nepali RMG industry.

The small-scale survey of RMG firms and key informants has shown that the ATC expiry has adversely affected Nepal's RMG sector. The industry is finding it difficult to compete in the United States market. Firms rely completely on imports for raw materials – which are sourced mostly from India, followed by China. This raises costs compared with rival RMG-producing countries. RMG entrepreneurs believe that getting duty-free access to the United States market will increase exports to that country. Export policy, tax incentives, the labour market, availability of skilled manpower, market access and availability of machinery are important factors affecting RMG exports. Export policy, labour market and tax incentives have been identified as the three most important factors (in that order) that the Government must address. Among trade, competition, tax and infrastructure/financial sector development policies, trade policy is considered the most important, followed by tax policy and infrastructure/financial sector development, and competition policy.

The rigid labour law has been identified as the most serious constraint on export competitiveness. Unconducive industrial and export policies, severe power cuts and poor infrastructure are other constraints. The possibility of Chinese investment in Nepal's RMG sector is considered low due to differences in language and culture as well as the rigid labour law and poor infrastructure.

Annexes

Annex I

A. List of the surveyed firms

Name of owners	Sex	Name of the firms/industry	Location	Types of ownership	Year of establishment [AD/(BE)]
Sanjay Kumar Agrawal	Male	Heritage Fashion	Lalitpur	Single	1999 (2056)
Harash Garg	Male	Rara Apparels Pvt. Ltd.	Baneshwor, Kathmandu	Partnership	2001 (2058)
Nitika Sethi	Female	NS Exports Pvt. Ltd.	Kapan, Kathmandu	Single	2007 (2064)
Kazi Sherpa	Male	Sherpa Outdoor Sports Goods Industry	Tangal, Kathmandu	Partnership	1993 (2050)
Chhote Lal Rauniyar	Male	Adam and Que Boutique	Tahachal, Kathamndu	Single	1986 (2044)
Damar Adhikari	Male	Peace Nepal Fashion Industry Pvt. Ltd	Kapan, Kathmandu	Single	2007 (2064)
Ashok Man Shakya	Male	Star Fashion	Harisiddhi, Laliptur	Partnership	1985 (2042)
Sashindra Bd Shrestha	Male	Gaurav Exports	Kapan, Kathmandu	Partnership	1999 (2056)
Ashok Kumar Agrawal	Male	A. C. Garments	New Baneshwor, Kathmandu	Single	1992 (2049)

B. List of the key informants interviewed

First name	Sex	Designation
Prashant Pokharel	Male	President
Udaya Raj Pande	Male	First Vice-President
Kedar Pd. Poudel	Male	General Secretary
Sanjaya Kumar Agrawal	Male	Executive Member

Annex II

A. Questionnaire for firms

1. Profile of respondents
a. Name of the industry/RMG firm:
b. Address:
c. Name of owner:
d. Sex: Male □ Female □
e. Types of ownership: (i) Single □ (ii) Partnership □

2. Background of the RMG firm
a. Year of establishment:

b. What was your initial capital on establishment?
NRs……………..

c. Employment in 2004 (the last year before ATC expiry) and now:
2004 – Male…….. and Female………. Now – Male…….. and Female……….
Tailors …….
Floor supervisors …….
Helpers …….
Administrative staff ………

d. What are your top three export markets? What are their shares in your total exports (%)?

S.N.	Export market	Share in total RMG exports of your firm (%)
1		
2		
3		

e. Value of exports and capacity utilization in the last five years:

Year	Export value	Capacity utilization (%)
1st		
2nd		
3rd		
4th		
5th		

f. How is your profitability? Profit □ Loss □

If your firm is earning a profit, what is the rate of profit (%)? ………..

g. Do you use imported materials (inputs) for production? Yes □ No □

h. If yes, from where do you import more than 50 per cent of your (materials) inputs?
(a) India □
(b) China □
(c) Other (specify)

i. What are the top three source countries for importing materials (inputs)?

(a)
(b)
(c)

j. If you use imported materials (inputs), what is the main reason for using them?

(a) Locally non-available □
(b) Cost effective □
(c) Other (specify)………………

3. Trade environment after expiry of the ATC

a. Do you know about the ATC expiry? Yes □ No □

b. Do you still export your products? Yes □ No □

If yes which are your top three markets for exports post-ATC expiry?

1. ……………. 2. ……. …………. 3. . ……………..

Which were your top three export markets before the ATC expiry?

1. …………………. 2. ……. …………. 3. ..……………..

c. Did you buy any new capital assets after the ATC expiry? Yes □ No □

d. Has competition in the international market toughened after the ATC expiry?
Yes □ No □

e. Impacts of the ATC expiry on other aspects of business

	Better	**Worse**	**Same**
Productive capacity			
Overtime work			
Outsourced work			
Benefits to employees			

f. Do you think RMG SMEs in Nepal can survive much longer in the post-ATC period?
Yes □ No □

g. Have you taken any measures to cope with the competition in the post-ATC period?
Yes □ No □

h. If yes, what measures have you taken?

(a) Upgrading of technology □
(b) Others (specify) ……………

4. Policy

a. Please rate the importance you attach to the following, in terms of their effects on RMG exports (1 = not important, 2 = somewhat important, 3 = important, 4 = very important, 5 = most important).

S. No.	Factors	Importance
1	Export policy	1 2 3 4 5
2	Tax incentives	1 2 3 4 5
3	Labour market	1 2 3 4 5
4	Availability of skilled manpower	1 2 3 4 5
5	Market access	1 2 3 4 5
6	Availability of machinery	1 2 3 4 5

b. Mention the three most important things (from among the above-mentioned factors) that the Government should do to promote competitiveness of RMG in the international market.

i. …………………..   ii………………………   iii…………………….

c. Will getting duty-free access to the United States market increase your exports?
Yes □   No □

d. Please rate the importance that you attach to the following issues regarding competitiveness (1 = not important, 2 = somewhat important, 3 = important, 4 = very important, 5 = most important):

S. No.	Factors	Rating
1	Trade policy (policies related to import and export of production, such as tariffs and customs procedures)	1 2 3 4 5
2	Competition policy (helps to ensure that companies operate in more competitive markets)	1 2 3 4 5
3	Tax policy (level of the tax burden and tax design of tax policy, including the way it is administered, directly influencing business costs and returns on investment)	1 2 3 4 5
4	Infrastructure and financial sector development (lack of infrastructure and/or a stable financial sector may impede the realization of investment)	1 2 3 4 5

e. Please mention other constraints on Nepalese RMGs' competitiveness in export trade………..

…………………………………………………………………………………………………….

B. Checklist for key informant interviews

1. Profile of respondents

a. Name of the respondent: b. Sex: Male □ Female □

c. Address:

2. Trade environment after expiry of the ATC

a. Do you know about the ATC expiry? Yes □ No □

b. Which are the top three markets for exports before and after the ATC expiry?

S. No.	Before ATC expiry	After ATC expiry	Remarks
1			
2			
3			

c. Has competition in the international market toughened after the ATC expiry?
Yes □ No □

d. Impacts of the ATC expiry on other aspects of business

	Better	Worse	Same
Productive capacity			
Overtime work			
Outsourced work			
Benefits to employees			

e. Do you think RMG SMEs in Nepal can survive much longer in the post-ATC period?
Yes □ No □

f. Has the Government taken any measures to cope with the competition in the post-ATC period?
Yes □ No □

If yes, what measures has the government taken?
(a) Customs duty exemption for upgrading of technology
(b) Tax exemption
(c) Subsidies
(d) Others (specify) ……………

3. Policy

a. Please rate the importance that you attach to the following in terms of their effects on RMG exports (1 = not important, 2 = somewhat important, 3 = important, 4 = very important, 5 = most important).

S. No.	Factors	Importance
1	Government export policy	1 2 3 4 5
2	Tax incentives	1 2 3 4 5
3	Labour market	1 2 3 4 5
4	Availability of skilled manpower	1 2 3 4 5
5	Market access	1 2 3 4 5
6	Availability of machinery	1 2 3 4 5

b. Mention the three most important things (from among the above-mentioned factors) that the Government should do to promote competitiveness of RMG in the international market.

i. ………………….. ii……………………… iii…………………….

c. Will getting duty-free access to the United States market increase RMG exports?

Yes ☐ No ☐

d. Please rate the importance you attach to the following issues regarding competitiveness (1 = not important, 2 = somewhat important, 3 = important, 4 = very important, 5 = most important).

S. No.	**Factors**	**Rating**
1	Trade policy (policies related to import and export of production, such as tariffs and customs procedures)	1 2 3 4 5
2	Competition policy (helps to ensure that companies operate in more competitive markets)	1 2 3 4 5
3	Tax policy (level of the tax burden and tax design of tax policy, including the way it is administered, directly influencing business costs and returns on investment)	1 2 3 4 5
4	Infrastructure and financial sector development (lack of infrastructure and/or a stable financial sector may impede the realization of investment)	1 2 3 4 5

e. Please mention other constraints on Nepalese RMGs' competitiveness in export trade………..

…………………………………………………………………………………………………….

f. Is there any possibility of Chinese investment in the Nepalese RMG sector?

Yes ☐ No ☐

g. What are the barriers, if any, to Chinese investment?

References

ActionAid and SAWTEE, 2007. *Impact of Textiles and Clothing Quota Phase-Out on Nepal.* ActionAid Nepal and South Asia Watch on Trade, Economics and Environment, Kathmandu.

Adhikari, R. and C. Weeratunge, 2006. “Textiles and clothing sector in South Asia: Coping with post-quota challenges”, in *South Asian Yearbook 2006.* , New Delhi.

Adhikari, R, 2007. Government support to textiles and clothing sector: A study of select Asian countries”, discussion paper, South Asia Watch on Trade, Economics and Environment, Kathmandu.

Balassa, B., 1965. Trade Liberalization and Revealed Comparative Advantage. Manchester School of Economics and Social Studies, No. 33; pp. 99-123.

Business Manager for Managers, June 1999, pp. 17 and 27-36.

Bossak, J. and S. Nagshima, 1997. Corporate Strategies for a Borderless World: Sharpening Your Competitive Edge. Asian Productivity Organization, Tokyo.

Dahal, N., 2006. “Review of Nepalese garments industry in the quota -free regime”, report prepared for the UNDP Regional Centre, Colombo.

Hoen, A. R. and J. Osterhaven, Undated. “On the measurement of comparative advantage”. Available at http://som.rug.nl/.

Mahmood, A., 2004. “Export competitiveness and comparative advantage of Pakistan’s non-agricultural production sectors: Trends and analysis”, *The Pakistan Development Review*, vol. 43, No. 4, Part II (winter). Asian Development Bank, Manila.

Mikic, M. and J. Gilbert, 2007. Trade Statistics in Policymaking: A Handbook of Commonly Used Trade Indices and Indicators. Trade and Investment Division, United Nations Economic and Social Commission for Asia and the Pacific, Bangkok.

Ministry of Finance, 2007. *Economic Survey 2006/07*. Kathmandu.

———, 2000. *Economic Survey 1999/2000*. Kathmandu.

Ministry of Industry, Commerce and Supplies, 2004. “Trade and competitiveness study”. Kathmandu..

Nayak, P. and T. K. Raout, undated. “Indian apparels competitiveness in post-ATC EU market”. Available at www.fibre2fashion.com (accessed 25 July 2008).

Nordas, K. H., 2004. *The Global Textile and Clothing Industry Post the Agreement on Textiles and Clothing*. World Trade Organization, Geneva.

Pant, D. and D. Pradhan, 2002. “Garment industry in South Asia: Rags or riches?” in G. Joshi (ed.), *Competitiveness, Productivity, Job Quality in the Post-MFA Environment*. South Asia Multidisciplinary Advisor Team and International Labour Organization, New Delhi.

Raihan, S., R. Adhikari and K. Adhikari. 2007. *Export Diversification for Human Development in the Post-ATC Era.* Asia-Pacific Trade and Investment Initiative, UNDP Regional Centre, Colombo.

Shakya, B. M., 2005. “Sustaining Nepalese garment industry after quota abolition”, Economic Policy Network Policy Paper 3. Prepared for Economic Policy Network, Ministry of Finance and Asian Development Bank/Nepal Resident Mission, Kathmandu.

The Kathmandu Post, 2001. “Garment industry braces for another setback”, vol. IX, No. 139, 6 July 2001.

Trade and Export Promotion Centre, 2008. Nepal Overseas Trade Statistics 2007, Kathmandu, Nepal.

World Bank/Federation of Nepalese Chambers of Commerce and Industry, 2003. “Nepal trade and competitiveness study”. Kathmandu.