Contribution of construction-related commodities to the trade balance

Zainudeen, N, Amaratunga, RDG and Niraj, T

CONTRIBUTION OF CONSTRUCTION-RELATED COMMODITIES TO THE TRADE BALANCE OF SRI LANKA

M.N.Zainudeen[1], T.Niraj[1] and D. Amaratunga[2]
[1]Department of Building Economics, University of Moratuwa, Sri Lanka, 10200
E-mail: nisa@mail.ac.lk
[2]Research Institute for the Built and Human Environment,
University of Salford, Salford M7 1UN
E-mail: R.D.G.Amaratunga@salford.ac.uk

ABSTRACT: This research aims to analyse the contribution of construction-related commodities to the trade balance of Sri Lanka.
The study has been carried out on selected 310 construction materials and equipments according to Harmonized System (HS) Codes. Further a survey had been done on 215 importers of steel to determine the percentage of imported construction-related steel on the total imported steel. Trend analysis is done over the last decade, with the supported information from price indices, general duties, tariff reforms, economic status of the country and past performance of the construction industry itself.
It is found that the contribution of imported steel, cement, electrical items and machineries is more than 80% on total imported construction-related commodities. Steel ranks first among the construction related commodities followed by cement, electrical items and machineries. With an annual average contribution of 24.34% to trade balance, the construction-related imports stand as a main area to be reviewed & reconsidered for the related policy changes.
Key Words: - Construction Industry, Construction Materials, Trade Balance

1 INTRODUCTION

1.1 Background

After the recent years of virtual economic stagnation in the country and the worldwide trade depression, Sri Lanka faced great difficulties in balancing its payments successfully and rapidly, without incurring sufficient economic and social costs. According to Central bank report of Sri Lanka (Central Bank, 2003) the deficit in overall balance of payments widened to US $ 522 million in 2000 (3.1% of GDP), compared to a deficit of 1.7% of GDP in 1999 and a surplus of 4% of GDP in 1998. This had triggered a reserves crisis as official reserves dropped by 36% since 1999 to about US $ 1049 million by the end of 2000, sufficient to finance only about 1.7 months of imports. The seriousness of this crisis got reduced after the surplus in overall balance of payment of US$ 220 million in 2001 and US$ 338 million in 2002. However, the ongoing economic recovery period & the expected inflationary transition due to the middle-east crisis may press on to reduce the external official reserves in the coming years. This predicament situation may become as one of the serious, major economic problem in the near future.

As the major component in the balance of payments, trade balance, especially the imports takes a major part in this crisis. Contribution of construction-related commodities to the trade balance, which is said to be 20%-30% (still increasing) in turn, will affect the balance of payment. There fore it is necessary to investigate the contribution of building materials to the trade balance in order to facilitate policy making.

1.2 Aims and Objectives

- To identify the construction related commodities, which contribute to the trade balance of Sri Lanka.
- To determine the value and percentage of construction-related commodities in the trade balance and to analyze the trend of the selected such commodities throughout the last decade.
- To identify the changes in tariff structure over this period for the selected construction-related commodities.
- To suggest means of improvement.

1.3 Methodology

The research focused on 310 construction-related commodities, selected with reference to Harmonized System (HS) Codes. This is the classification system used in the source document "External Trade Statistics" which provides detailed information on imports and exports. The selected commodities are then categorized into 16 categories. As the HS classification doesn't identify the steel used for construction separately, a survey has been done on 215 steel importers of year 2000 to determine the percentage of steel imports related to construction industry. These 215 importers import more than 90% of the total steel imports.

The research mainly considered the contribution of construction industry to trade balance and therefore the value of import and export of construction-related commodities should have been taken. However, there aren't any exports related to construction in the Sri Lankan context. Hence, the study is further narrowed down to imports of construction –related commodities. The import values for the selected 310 commodities have been extracted from External trade statistics for the last 10 years and analysed together with information gathered on the changes in ICTAD price indices for the considered categories, general duties on the important 120 construction related commodities, changes in economic status of the country and the past performance of the construction industry.

1.4 Scope

The commodities which cannot be identified according to the 'Harmonized system of referring' are excluded from the study. However, the contribution of these commodities is expected to be negligible as all the significant items are identified through HS Coding.

1.5 Limitations

Other than the commodities which are exclusively used in construction such as cement, asbestos etc., the balance commodities contain a lesser proportion of other industry related components which could not be identified separately.

Further iron and articles of iron are defined with chemical names and sizes. As construction related component cannot be separately identified from this, a survey is carried out on the importers of steel and iron to find the percentage of construction related steel on the total import of steel.

2 THE COMPOSITION OF BALANCE OF PAYMENT AND ITS EFFECTS

2.1 Balance of Payments Categories

According to Alan C. Shapiro, the balance of payments is "An accounting statement that summarizes all the economic transactions between residents of the home country and residents of all other countries" (Shapiro 1998). But this definition is frequently tested by the *Informal market* (Black market) currency transactions, especially in developing countries. In real terms for published Balance of Payment (BOP) accounts, a better definition would be "An accounting statement that summarizes all the formal economic transactions between the home country and the other countries; in other words legal transactions that involve payments or receipts of foreign exchange".

BOP statistics are published annually in the Central Bank Annual Report of Sri Lanka. These statistics are always prepared in US$, as United States holds the major potion of the country's foreign currency reserves. It is converted to SL Rupees whenever needed.

The largest component of BOP is Trade Balance. This is the difference between nation's imports and exports of merchandise.

3 HARMONIZED SYSTEM OF REFERRING

3.1 Harmonized System of Referring

"Harmonized commodity description and coding system" generally referred as "Harmonized system"(HS), is a coding or classifying procedure of commodities set out in the International convention on Harmonized commodity description and coding system. Sri Lanka is a contracting party to this convention and therefore the classification of commodities should comply with the harmonized system of referring. The intention behind this reference is to set out a standard for classification of commodities among the countries to facilitate conformity in recording worldwide transactions and to categorically identify the position of international trade in the world economy.

This research considered HS as the base of classification of items and categories as the statistics available on imports and exports of the commodities are based on harmonized system of referring. The revenue protection order No. 02/2002 of customs notification, which comes under Revenue Protection Act No 19 of 1962 published by Ministry of Finance on 22nd march 2002, is used as the guideline for reference of HS Codes. This consists of 21 sections, subdivided in to 99 chapters, which is further divided into subchapters. These are provided only for easy reference. Each section is based on raw materials used such as live animals and animal products, vegetable products, mineral products, plastics and rubber articles, textile and article there of, base metals and articles of base metals etc. The chapters further divided these sections in to very specific topics. For example, the section 'Base Metal and Article of it' is divided into aluminium, iron and steel, articles of iron and steel, copper and article there of, tin and articles thereof etc.

According to this latest government notification of revenue protection order, items based on HS Codes are referred and taken into study. Appropriate chapters are referred first and then the total construction-related commodities are selected from the list of products given in HS Code. These selected 310 commodities are put into defined categories of 16 main construction-related commodity streams. These defined 16 categories are,

1. Cement
2. Electrical items
3. Iron and steel
4. Machineries
5. Ceramic products
6. Asbestos
7. Glass
8. Paints, varnishes and putty
9. Prefabricated components
10. Articles of plastic
11. Building stones and their articles
12. Carpets
13. Articles of Aluminium
14. Bituminous substances
15. Wood
16. Other items

The division is made based on the raw materials used to produce such items, in accordance with "Harmonized commodity description and coding system" (HS Codes). The normal way of classifying the materials used in building, as elements and main components is followed as much as possible for better understanding.

4 DISCUSSION

As the contribution of construction related commodities depend heavily on the performance of the construction industry, it is important to look at the past trend of the performance of construction industry.

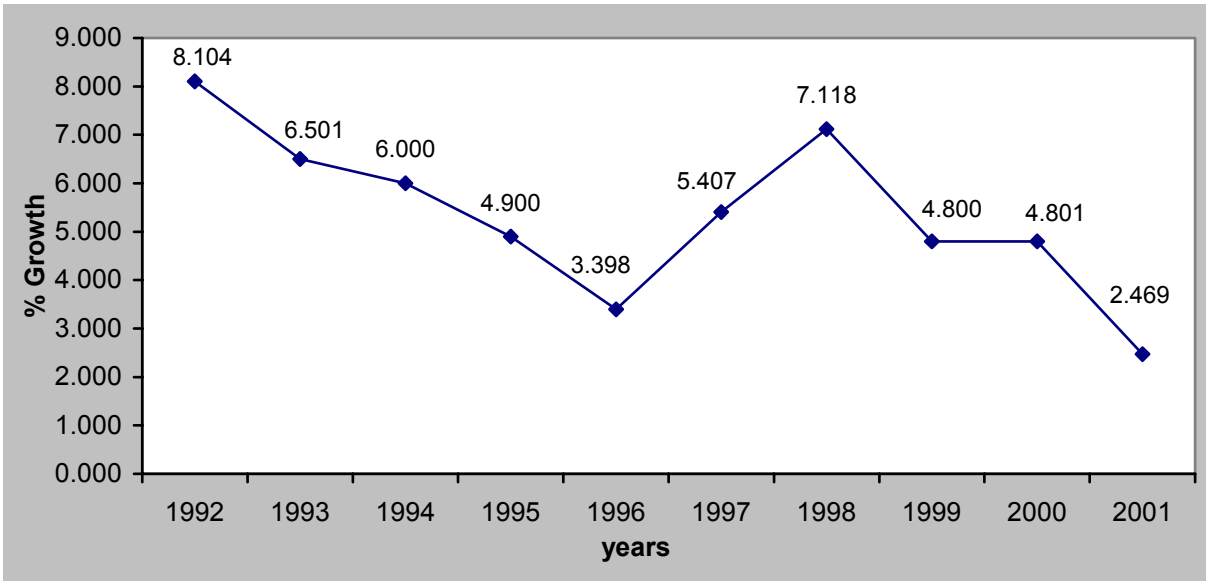

Figure 1. Construction growth
Source: Central Bank Annual Reports

Construction value added accounts to an annual average growth rate of 5.03% in the past decade. However, the Sri Lankan construction industry faced unfavourable conditions in the early 1990's, as the construction GDP growth dropped gradually from 8.1% in 1992 to 3.4% in 1996. The combination of prudent monitory management and better fiscal policy measures increased the growth to 7.1% in 1998 (Central Bank, 1999). The global economic crisis again hindered this upturn in 1999. Further, the unfavourable global economic environment exacerbated by domestic uncertainties affected the whole economy including the construction industry negatively in the years 2000 and 2001, ending up with the lowest growth rate for the last decade of 2.5% in 2001.

Analysis shows that, among the 16 categories of construction related materials, Iron and steel, Cement, Electronic items, Machineries and Ceramic products are the major 5 categories of imports. The average contribution of these 5 items to the total value of imports of construction-related commodities is around 80% every year. Analysis is done considering constant prices based on 1992 annual average exchange rate of US$ unless otherwise specifically stated.

Table 1. Annual Average Exchange Rate of US$ to SL Rupees

Period	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
US$	43.83	48.25	49.42	51.25	55.27	58.99	64.59	70.39	75.78	89.36
Index	100.00	110.08	112.75	116.93	126.10	134.59	147.36	160.60	172.90	203.88

Source: Central Bank of Sri Lanka, (2002)

4.1 Steel

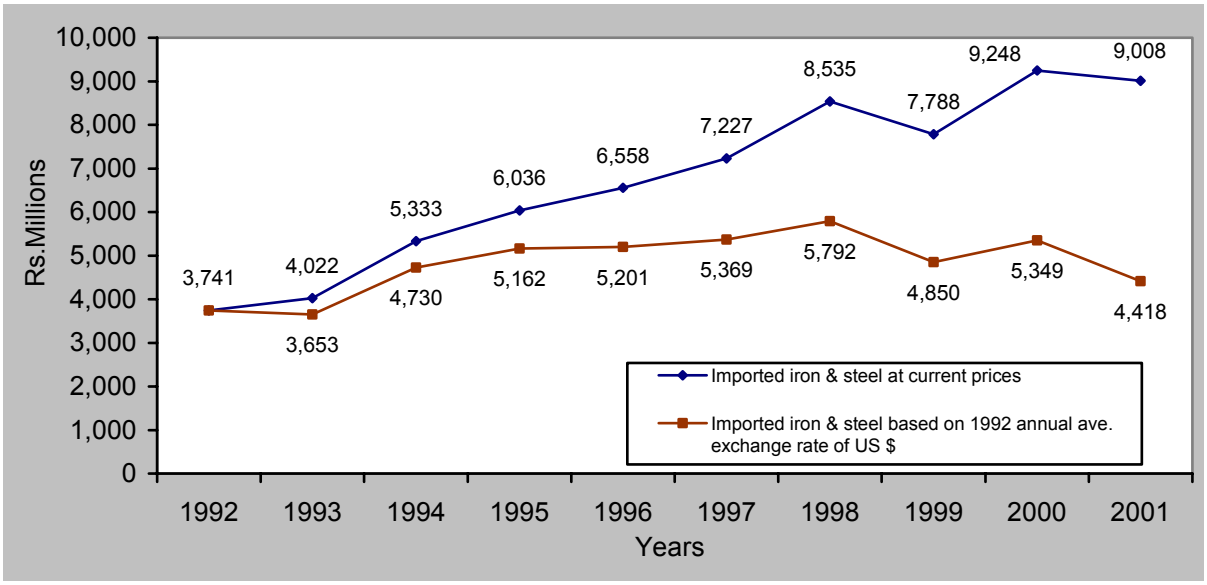

Figure 2. Imported Iron & Steel

Steel, the major contributor to the import of construction related commodities is fully imported, as the country doesn't have any natural iron resources. The imported steel and iron value increased up to 1998 and declined thereafter. The value of import of steel shows a strong positive correlation with the construction GDP growth. The government encourages import of raw iron and production of the articles of iron locally by imposing higher duty on import of articles of iron. The general duty of 10% on iron from 1992 to 2000 had been taken off and made free of duty in 2001. Duty on articles of iron had been reduced from 50% in 1992 to 25% - 10% in 2001. As the contract sum of a project is significantly affected by the changes in price levels of reinforcement bars, further reduction of duty may enable to reduce cost overruns in projects.

4.2 Cement

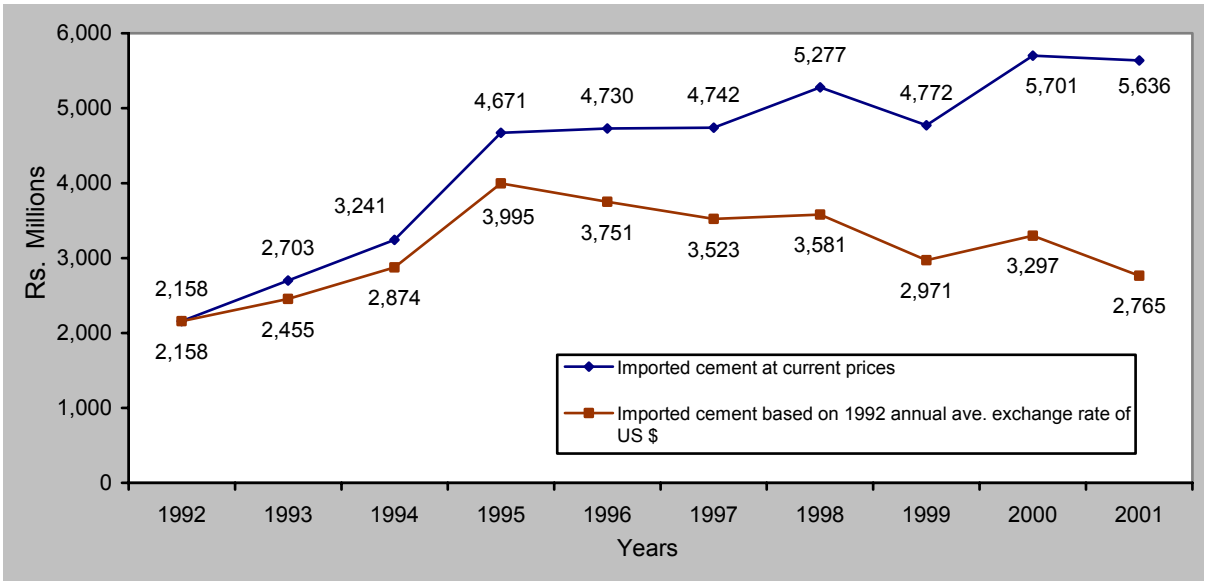

Figure 3. Imported Cement

Cement is exclusively used for construction purposes. Hence it is used as a regulator of the construction industry by the government. Further, the government can control price levels since imported and locally produced cements are available. This research considered clinker as a part of cement category as it is imported solely for the purpose of cement production. Import of clinker has increased steadily with an annual average growth of 11.51%. The imported clinker is ground and packed locally and is available at the lowest price in local market. Another major change in the cement imports is the downward trend in the import of 50 kg bags, due to increased quantity of imports of bulk cement, which is packed locally. The overall value of imported cement increased up to 1995 and gradually declined thereafter, with the annual average growth of 2.79%. Also it is identified that the price of cement has almost doubled in the last decade. An issue that warrants attention is the import of poor quality, cheap cement and clinker, from India, under the "Indo-Sri Lanka free trade agreement", which has become a major threat to the industry as well as local manufacturers.

4.3 Electrical Appliances and Control Gears

The third major contributing category is the electrical items. An annual average growth of 5.33% is observed despite the declines in 1996 and 1999. This decline is identified as an outcome of low import of discharge lamps and protective devices. The duty on most of the electrical goods had been reduced from 50% in 1992 to 10%-5% in 2001. Further, energy efficient lamps had been exempted of duty in order to conserve electricity. According to experts in industry, the price increase of electrical items is very high in high quality items despite the marginal increase shown by the ICTAD price indices. Anyhow this category of items must be further reviewed on the aspect of general duty as some of the advanced electrical goods cannot be produced locally.

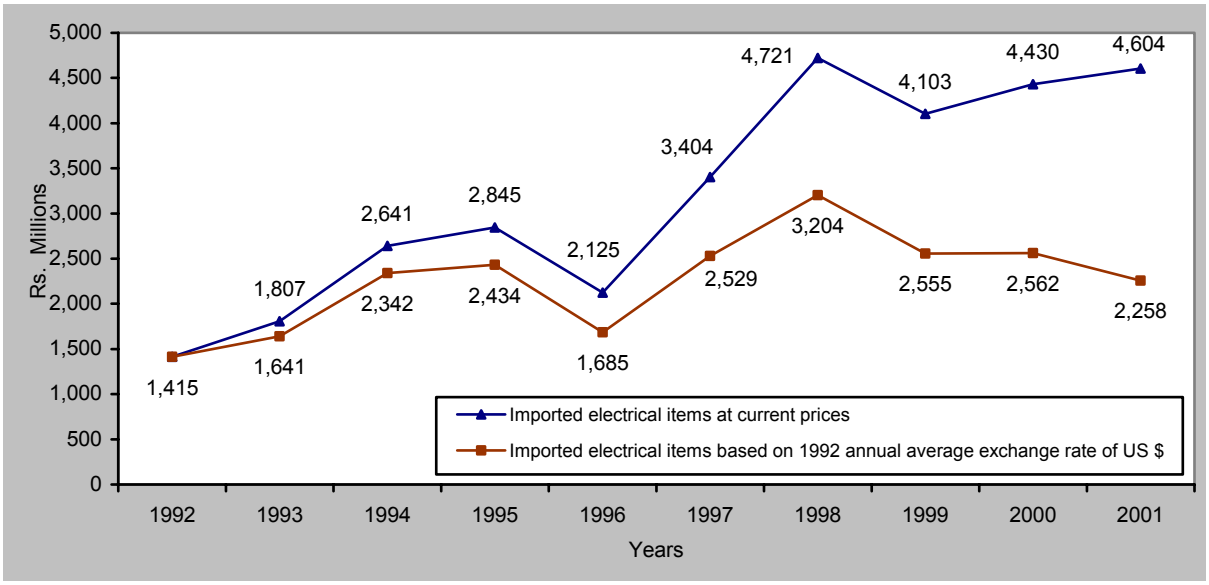

Figure 4. Imported Electrical Fittings

4.4 Machineries & Mechanical Appliances

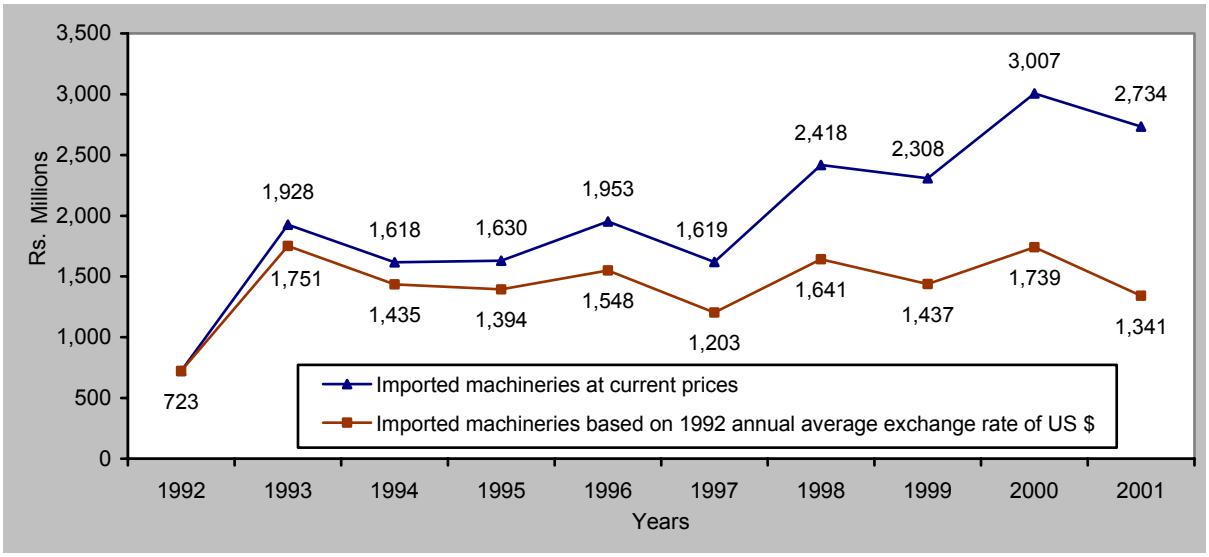

Figure 5. Imported Machineries & Mechanical Appliances

Value of imported construction-related machineries stayed around Rupees 1.5 Billion over the last decade, except in 1992. Plant-hire companies emerged after the liberalization of economy in Sri Lanka (Wickramasinghe, 1994). This certainly helped the construction industry as contractors are always afraid of investing in plant due to 'capital tied-up' situations. Considering the needed investment on machineries the Government also had reduced the general duties on these commodities over the last decade. It is also found that the response of the total value of imported construction related machineries to the construction growth was negligible due to the 'long-life nature' of investment goods.

4.5 Ceramic Products

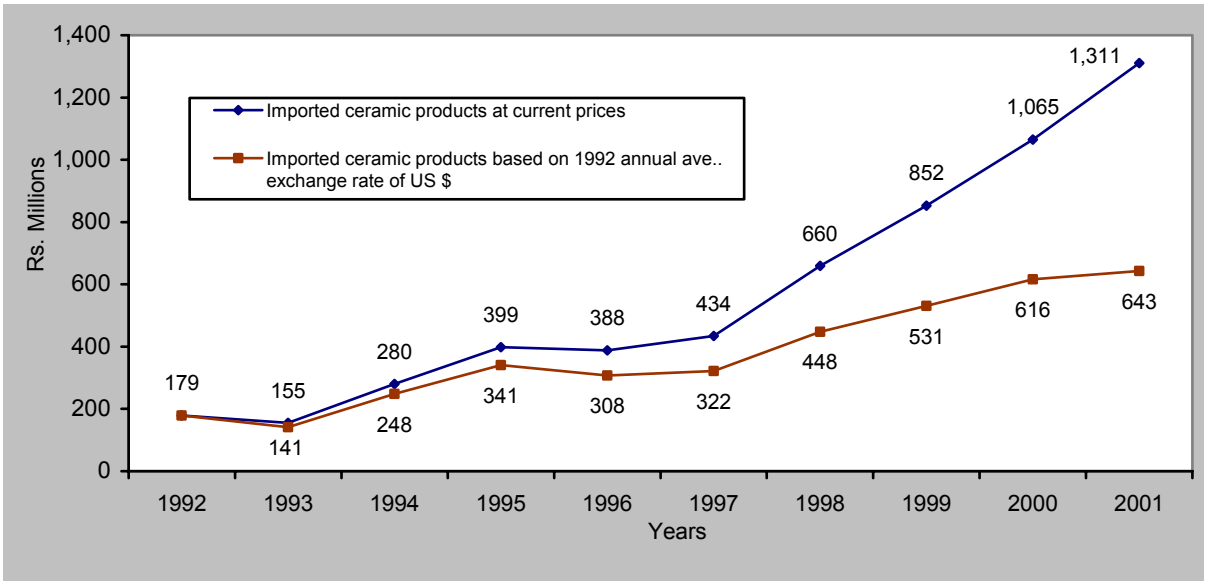

Figure 6. Imported Ceramic Products

Import of ceramic products with a high average annual growth of 15.24% has shown a continues growth, especially after 1997 with a steep rise. Inadequate supply of locally produced ceramic products and the notable increase in ceramic tile use may be the reasons for this. The penetration of new agents of foreign ceramic product companies after 1997 had further reduced the local product consumption.

4.6 Other Construction related commodities

Except above five categories, the value of all other categories of imported construction-related commodities contributed with lesser than 15% on total. The category of prefabricated buildings had grown over the years and expected to pickup at a higher rate as the need of commercial world to finish construction at a short time period continue to grow. Import of plastic had reduced over the years, since the local industry had performed well. Even though these categories are not significant at present, the change in technology, preference and design may make some of these items important in the future.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Table 2. Import of Total Construction related commodities

Given in CIF value Rs. Million, at current prices

Category	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Iron & steel	3,741	4,022	5,333	6,036	6,558	7,227	8,535	7,788	9,248	9,008
Cement	2,158	2,703	3,241	4,671	4,730	4,742	5,277	4,772	5,701	5,636
Electrical items	1,415	1,807	2,641	2,845	2,125	3,404	4,721	4,103	4,430	4,604
Machineries	723	1,928	1,618	1,630	1,953	1,619	2,418	2,308	3,007	2,734
Ceramic products	179	155	280	399	388	434	660	852	1,065	1,311
Asbestos	251	297	197	62	172	5	126	473	345	892
Glass	460	386	367	399	369	371	385	405	563	640
Paints, varnishes & putty	537	213	1,259	279	318	364	432	471	552	639
Prefabricated buildings	44	153	61	194	202	345	381	289	438	562
Articles of plastic	106	162	195	256	286	374	267	300	387	408
Building stones & their articles	11	56	66	142	93	96	216	117	139	344
Carpets	27	41	75	65	59	78	137	115	142	197
Articles of Aluminium	60	99	341	163	250	177	191	147	165	178
Bituminous substances	7	10	42	100	74	92	94	90	84	98
Wood	22	14	78	187	475	55	41	50	35	47
Other items	112	175	135	178	155	149	146	301	294	325
Total construction related imports	9,853	12,220	15,928	17,606	18,205	19,533	24,026	22,581	26,595	27,624
Annual average exchange index for US $	100.00	110.08	112.75	116.93	126.10	134.59	147.36	160.60	172.90	203.88
In constant Rupee term (Total construction related commodities based on 1992 annual ave. exchange rate of US $)	**9,853**	**11,100**	**14,127**	**15,057**	**14,437**	**14,513**	**16,304**	**14,060**	**15,382**	**13,549**
Total Imports based on Annual average exchange index for US $	153,555	175,820	208,930	232,792	238,758	257,100	257,957	262,699	320,593	261,412
Total Trade Balance based on Annual average exchange index for US $	45,700	50,302	68,310	65,945	58,770	53,372	47,325	60,223	77,605	50,320

Source: Extracted data from External Trade Statistic

Change in the structure of imported construction-related commodities indicates the evolution of construction industry especially its total expenditure on imports.

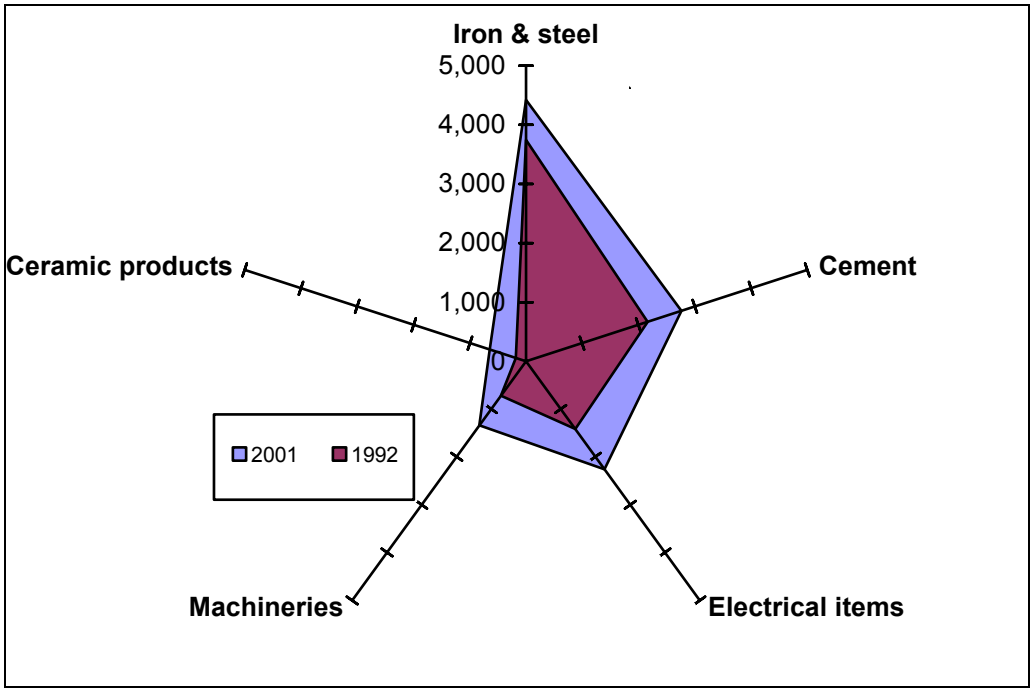

Figure 7. Import Structure of Construction-related Commodities in Constant Rupee Term

Figure 7 shows that the industry, which had steel and iron as the major contributor, still stands with the same structure but with an increased percentage of contribution from electrical items and ceramic products.

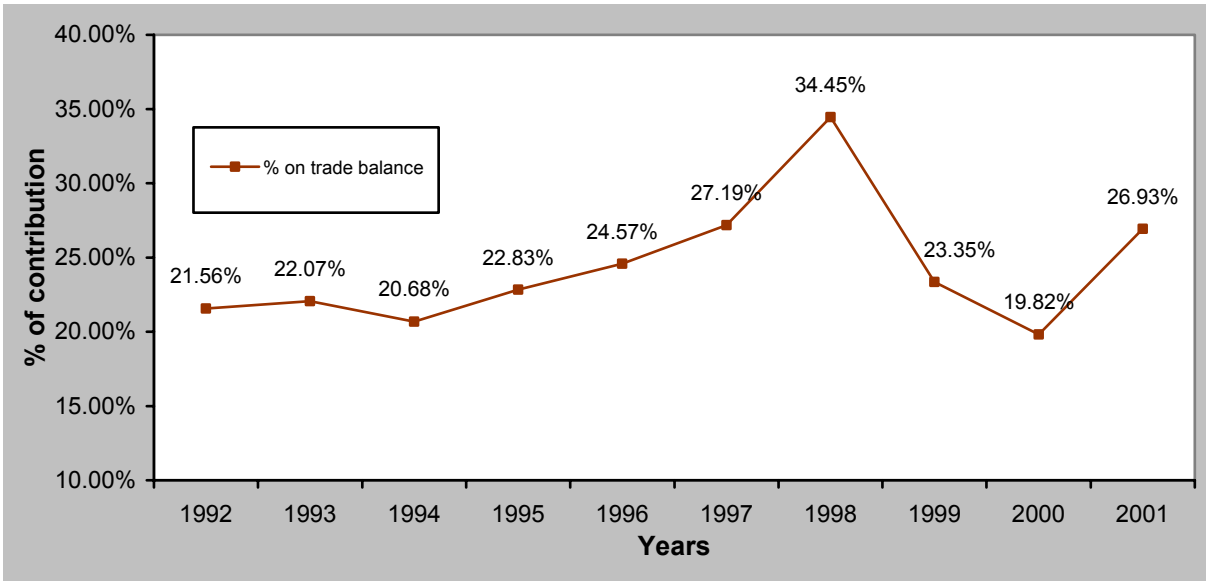

Figure 8. Contribution of Construction-Related Commodities to Trade Balance

Total value of imported construction-related commodities (in constant factor price) had increase up to 1994-1995 and stayed around Rupees15 billion in the latter years. This total value is divided by trade balance to find the contribution of construction related commodities to trade balance.

Instead of custom figures, adjusted figures for lags and other factors in recording for import and trade balance from central bank reports are taken for this purpose, since the construction-related commodities are almost free of lags and errors in recording according to customs officials. With an annual average contribution of 24.34% to trade balance, the

construction-related imports stands as a main area to be reviewed and reconsidered for the related policy changes. As this figure doesn't seem to be dangerous to the economy, the collection of impacts in the long run may result in adverse effects both to the construction industry and to the economy as a whole.

5.2 Recommendations

This study focused on identifying the contribution of construction related commodities to the trade balance of Sri Lanka. As an industry with significant imports there is a need to promote domestic material use. A positive attitude change is required from the construction industry in this context, especially from the people who recommend the selection of materials and design. Special concern should be given to the imported commodities of inferior quality.

The HS classification used for the selection of material should be consistent to study and evaluate the trend of commodities. However according to the central Bank economists, changes have been done in each proposal of revenue protection orders (where the HS coding are given), which make them difficult to transfer custom figures to end-user classification table, as in different years different HS Code has been given to refer a particular commodity. For this research, several HS Codes had to be referred back to earlier issue of revenue protection orders in order to understand and decide the material selection. Therefore it is advisable for the Ministry of Finance to follow a standard in defining these HS Codes.

Institutions such as Sri Lanka customs and Inland Revenue Department handle a large amount of documentation work manually. The source document used for this research, the External trade statistics, is based on manually complied information contained in the import or export entries and declarations submitted to customs. Therefore the dependability of the source documents itself is questionable. Computerizing this system would improve the reliability and efficiency of the recording process.

The present government's policy shifts towards liberalization includes changes in tariff structure and reduction in general duty. As the overall Balance of Payment reduced at a higher rate after liberalization in 1977, the new proposals should consider those factors as well to manage such risk. Further the government inconsistently adjusted these general duties by giving different definitions to the duty bands. End users will benefit if the band inconsistencies are eliminated.

Imposing further duty on cement must be carefully done, as it had given adverse effects to the industry in a short time period in the past. Re-opening and full functioning of K.K.S cement factory will surely reduce the BOP and trade balance, as the product is highly regarded by the industry people. Further, the low quality cement and clinker imports from India should be stopped immediately. That needs a revision in the 'Indo-Sri Lanka free trade agreement'. This agreement imposes comparatively very low duties on the concerned products and it is a threat to the manufacturers and quality of domestic materials, and also to the quality of construction output in the long run.

6. REFERENCES

Appleyard.D.R & Field.A.J,(1995), *International Economics*, 2nd Ed, Richard.D.Irwin,Inc, Chicago, U.S.A.

Bank of Ceylon, (2002), *Environmental data up-date*, Economic research division, Bank of Ceylon, Sri Lanka.

Bank of Ceylon, (2002), *External environment analysis for corporate plan year 1998-2000*, Economic research division, Bank of Ceylon, Sri Lanka.

Bank of Ceylon, (2002), *Government Budget 2002 and impact on Bank of Ceylon*, Economic research division, Bank of Ceylon, Sri Lanka.

Board of investment, (1998), *Sri Lanka Investment Policies and Incentives*, Sri lanka.

Central Bank, (1990 to 2002), *Central Bank Annual Report*, Sri Lanka.

Central Bank, (1998), *Economic progress of independent Sri Lanka,* Sri Lanka.

Daily news, (2002), *Budget Speech 2003* 7th November 2002,Pg 21&22.

Institute for Construction Training And Development (1993 to 2001), *Bulletin of Construction* S*tatistics*, Institute for Construction Training And Development Publication,3 (03), Sri Lanka.

Jayawardane.A.S.,(1998), *Performance of the Economy since independence*, Ceylon Commerce,28(12), PP6-7.

Kappagoda N. & Paine S., (1981), *The Balance of Payment Adjustment Process: The Experience of Sri Lanka*, Marga Institute, Sri Lanka.

Lipsey R.G., Courant P.N., Purvis D.D. & Steiner P.O., (1993), *Economics*, 10th Ed., Harper Collins College Publishers, United Kingdom.

Ministry of Finance, (2002), *Customs Notification-Revenue Protection Order No. 02/2002*, Colombo, Democratic Socialist Republic of Sri Lanka, 1228/9.

Shapiro A.C., (1998), *Multinational Financial Management*, 4th Ed., Prentice-Hall India Private Limited, New Delhi.

Sri Lanka Customs, (1993 to 2002), *External Trade Statistics of Sri Lanka*, Statistics division, Department of Sri Lanka Customs.

Ukwaththa.U.A.S.R.J,(2000),*Imported building materials in Sri Lanka: Comparison with the domestic building materials industry*, Dissertation (B.Sc. in Quantity Surveying) . University of Moratuwa, Sri Lanka.

Wickramasinghe.J.W, (1994), *Economic consequences of the policy shift from import substitution to liberalized imports the case of Sri Lanka(1960-1984)*, S.Godage & Bros, Colombo, Sri Lanka.

Wickramasinghe.S, (2002), *A plan to rescue the construction industry*, Daily news, 6th November 2002,Pg 08.