RESEARCH ARTICLE

EFFECT OF EXPORT CESS ON EXPORTS OF COCONUT PRODUCTS FROM SRI LANKA: A MULTI-MARKET MODEL SIMULATION

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ABSTRACT

Coconut products exports have been a traditional foreign exchange earner for Sri Lanka from the agricultural sector. The specific objective of the study was to analyze effect of export 'cess' rates on coconut products from Sri Lanka. Secondary data (1960-2010) on the production and exports of coconut products was used in the analysis. The analysis of the effect of export "CESS" changes on commodity supply and input demand by processing industries showed that all the simulations had no significant impact on the supply of all the coconut products exported, and also on the demand for fresh nuts by the processors. The results also indicated that export "CESS" changes, even in the case of complete removal, had no significant effect on the export demand for coconut products. The impact of simulations on the consumption demand for all the coconut products showed no significant changes, ranging from very low values to 0.39 per cent for desiccated coconut. The effect of export "CESS" changes on incomes of producers, processors, exporting firms and government analyzed through simulations indicated that 30 per cent, 50 per cent and 100 per cent reduction in export "CESS" rates caused positive growth rates in the industry income, coconut products suppliers' income, exporting firms' income, whereas there was a loss to government tax revenue. The imposing of an export 'cess' on coconut products has various implications to all stakeholders. But it is essential to look into the development of the coconut industry in the long-run which urgently needs heavy investment either by the government or the private sector participants. Sri Lanka's coconut products exports have to be competitive on one side, as well as the industry needs investment to modernize production and increase exports. Complete removal of export 'CESS' rates have an impetus for the private sector to invest in the industry development to be competitive globally.

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INTRODUCTION

Coconut is the largest plantation crop in Sri Lanka and occupies the second largest area after rice. In the plantation agriculture, coconut occupies the highest area of nearly 402,649 ha (25 percent of the gross cropped area). Coconut is a very important commodity in Sri Lanka. It is used traditionally as a component in food, and about 70 percent of the production is consumed locally, while balance 30 per cent is used to produce of processed coconut products. About nine percent of the total expenditure on food of an average household is spent on coconuts, the principle source of edible oil and fats. In order to meet the high domestic consumption and also to meet the export demand; increased production of coconut is important, hence a strategic Government policy towards the development of the coconut sector is essential in the long-run. Coconut is

the most widely planted agro-based industrial crop in Sri Lanka, next to tea and rubber. Concurrently with the stagnation of the area under coconut, the total annual nuts production had varied and remained stable between 2,300 million and 3,000 million nuts, during the past two decades. The slow growth of coconut production is a serious impediment to the economic viability of the coconut industry. The main factors contributing to this situation are loss of productive coconut plantations, particularly in the 'Coconut Triangle' area, the vagaries of the weather, low input application such as fertilizer and poor crop management. With coconut exports from Sri Lanka facing severe competition from the Philippines and Indonesia has serious implications on volume of exports of coconut products and declines in foreign exchange earnings. If Sri Lanka does not take appropriate policy measures to address the current problem in the coconut industry, she may have to loose the export opportunities and also face severe domestic social issues in relation to employment and investment in the coconut sector. The specific objectives of the study were to develop a

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Multi-market model to analyze the impact of export 'cess' rate policy options and to quantify the magnitude of effects resulting, including the effects on production, prices, consumption, and exports of different coconut products.

Review of Literature

A brief summary of various types of multi-market models used to study the impact of policy changes on the export volume, prices and incomes of firms and tax revenue to the state, is provided below. Braverman *et al*. (1987) developed a multi-market approach and applied it to the livestock sector in Cyprus. The results showed that all animal products suffer a reduction in output, cost of living rises, and foreign exchange loss due to increased imports of traded livestock products. Sadoulet and de Janvry (1992) constructed integrated multi-market general equilibrium models to analyze the impact on poor cereal importing countries of rising world prices due to OECD trade liberalization. Results indicated rising food bills and exchange rate depreciation for some African countries, and the opposite in other low income cereal importing Asian and African nations. Dorosh and Bernier (1994) developed a multi-market model to analyze the various policy issues on food markets and households in Mozambique. Model simulations were conducted on the impact of restored agricultural production on prices, incomes and commodity supply and demand. Results indicated that the increased imports of maize would be an effective mechanism to increase real incomes and consumption of the poor households.

Simler (1997) for the analysis of agricultural policy issues and poverty in Malawi developed a multi-market model to analyze the effects of policy changes on commodity markets and on real incomes and consumption of poor households. Minot and Goletti (1998) used a multi-market spatial-equilibrium model to examine the effect of further liberalization of regional rice markets in Vietnam. The results suggested that it would increase average real income and slightly reduce the incidence of poverty in rural areas of Vietnam. Gulati and Kelly (1999); used a multi-market model to perform welfare analysis of the impact of trade liberalization on the Indian grain markets. The model was used to simulate the impact of unilateral trade liberalization on selected crops by calculating the effects of replacing the domestic prices (of wheat, pulses, edible oils, and cotton) with border price equivalents. Hudson and Ethridge (2000) in order to understand the consequences of price controls (through export taxes) across cotton and yarn markets in Pakistan, used a multi-market framework that helped to estimate the degree of distortion in allocation of commodities among domestic and trade markets. Results showed that the export tax on cotton increased domestic consumption and decreased exports of cotton in Pakistan, transferring income from cotton producers to yarn spinners and the government, which was a social loss in the cotton sector. Kondo (2001) developed a single commodity partial equilibrium multi-market model to study the impacts of liberalization export policies on the Indian cotton sector/ industry and concluded that it is not politically feasible to remove export restrictions of cotton, as well as the replacement of export quotas by export taxation. Karim (2003) in order to assess the influence of liberalization of international agricultural trade on Sudan's food security and on the whole economy, developed an extended form of a multi-market model for Sudan. The model simulations revealed that a higher world market price would overall lead to measurable gains in food security and

agricultural trade of the country. However, when the effect of a higher cost of production is considered, the positive results were reversed. Jha and Srinivasan (2004) built a multi-regional and multi-commodity model to analyze the impact of domestic trade liberalization in the rice and wheat markets in India in a partial equilibrium framework. The results of the spatial trade equilibrium model for rice and wheat showed that it is possible for a deficit state to import grains from a neighboring deficit state, or abroad depending on arbitrage benefits. As restrictions on domestic trade are relaxed, prices stabilize and there are welfare gains to producers, consumers and wholesale traders at the national level.

Stifel and Randrianarisoa (2004) used a multi-market model to assess the changes in poverty levels of household in Madagascar, in the wake of trade liberalization. Results of different policy simulations indicated that policies such as reduction in the farmgate-to-market margin, and an increase in fertilizer subsidies have a reasonably large effect on incomes and poverty of the poor. Dey *et. al.*, (2004) developed the ASIAFISH model, which is a multi-market equilibrium model for evaluating the effects of technology and policy changes on the prices, demand, supply and trade of various fish types. Moschini *et al*. (2005) developed a partial equilibrium, multi-market model of the European agricultural sector to study the impact of the introduction of Genetically Modified (GM) products on the economy, and found that it reduces welfare, both consumer's and producer's surplus over time. Katranidis *et al*. (2005) had employed a multi-market model to study the effects of EU/Common Agricultural Policies (CAP) on corn, cotton, sugar beet, and livestock farmers of Greece. They found that the income transfers to Greek farmers had risen between 1981 and 1992, and the1992 CAP reform led to a stabilization of income transfers, and lessened the negative impact on livestock producers.

Research Methodology

The research study is based on secondary data collected from various published sources. The data pertaining to macroeconomic indicators like volume of production of coconuts and coconut products, quantity of coconut products exported, and prices of coconut and coconut products in the domestic and international markets were collected for the period between 1970 and 2010. The impact of exchange rate changes on the coconut exports sector is analyzed through the Multi-Market Model for coconut products exports, and the impact of policy changes on the industry (producers and processors) and the public sector (on government tax revenues).

Multi-Market Analysis

Changes in coconut product prices (domestic or export product prices) have implications for producers and consumers of the product, government budgets and foreign exchange earnings. Therefore, in developing an analytical framework to examine the consequences of changes in producer prices or export prices in response to trade liberalization, it is imperative to model the supply and demand systems, in a multi-market framework.

The demand system can be divided into three broad groups –

i) Household demand (consumption),

ii) Processing industry demand (input), and
iii) Export demand (foreign trade).

A typical MM model, having a domestic supply system, a household demand system, an industry processing demand system, exports demand, and market clearing conditions can is specified for analysis. The multi-market model used in this analysis is a pioneering effort designed to facilitate analysis of export policy reform issues in the coconut sub-sector of Sri Lanka. The purpose of this Multi-Market Model is to reflect the conditions in the coconut sub-sector of Sri Lanka, as well as to take into consideration the recent trade liberalization policy of the Government of Sri Lanka (GOSL), especially the changes introduced in the coconut products export "CESS" rates. A description of the raw products, processed products and export categories, domestic and international prices are provided first, before elaborating on the structure and the equations that make up the model.

1. Product Categories

The product categories are broadly broken down into (a) raw products, (b) export products, (c) food (consumption) products, and (d) products used as inputs. More specifically, the coconut products include:

i). Fresh Coconuts (FNUTS)
ii). Copra (COPRA)
iii). Desiccated Coconut (DC)
iv). Coconut Oil (CNOIL)
v). Coconut Milk Powder (CMP)

Production Groups: Coconut smallholders and coconut processors

Consumption Groups: Households and Processors

Exporting Firms

Structure of the Model

In total, these 8 equations correspond to the 8 endogenous variables permitting the model to be solved. The GAMS codes using the NLP solver, was adapted to solve this system of equations and to run the simulations described below. Finally, once the systems of equations were solved, the export "CESS" levels of each the coconut product was used to simulate the effects of the policy change. These were then compared to the baseline levels that are consistent with the estimates of CBSL and CDA (2010).

Data and Calibration

Three types of data were used to calibrate the model to a baseline solution that describes the domestic and export coconut sector of Sri Lanka in 2010:

1. Levels: Production, consumption, income and input levels are defined for all commodities and household groups.

2. Prices: Initial consumer and producer prices are used for each commodity.

3. Behavioral Parameters: These are the demand and supply elasticities (β's and γ's in the equations above), some of which

are based on estimated values in literature, some are values from the range estimated for perennial crops such as cocoa and coffee, in other countries; while the income elasticity, input elasticity with respect to output prices, export demand and supply elasticities are best 'guesses' in the absence of reliable data. In calibrating the model, previous multi-market models developed for Vietnam (Goletti and Rich, 1998), and for Madagascar (Dostie *et al.*, 2000; Lundberg and Rich, 2002) were used as a guideline. In what follows, a description of the baseline solution of the model and the methods and data used to derive it, is given in detail. A simple Non-Linear Programming (NLP) format is used to program the model relationships in General Algebraic Modeling System (GAMS) codes, where an equal number of variables and equations are specified, maximize a "dummy" objective function and impose tradability conditions to allow for trade. Tradable commodities are cleared by net exports. The GAMS software was used in multi-market simulation program and simulation for different export tax scenarios.

Market Structure Equations

The Cobb-Douglas functional form is assumed and used for the supply and demand relationships. The log-linear form is used for estimation of the equations. The detailed structure of the Model equations are described in Sivarajah (2010).

Simulation Effects of Changes in 'Export CESS' Rates

The aim here was in studying the effect of a 30 per cent, 50 per cent increase or decrease, and a 100 per cent decrease in Export 'CESS' rates on coconut products exports. The CIMS model developed was used to simulate the effect of changes in export "CESS" rates, and to assess the impact on stakeholders of the coconut export industry. The results of the effect of export "CESS" rate simulations are presented in Table 5.37 to Table 5.43 below. The model simulations indicated that the effect of increasing or decreasing the export "CESS" by 30 or 50 per cent had no significant impact on the producer prices of all the exported coconut commodities. Whereas, complete removal of the export "CESS" on coconut products exported, showed marginal increases in producer prices for fresh nuts (3.21 per cent), copra (1.37 per cent), and desiccated coconut (1.05 per cent). The producer price increase for coconut oil and coconut milk powder were rather insignificant, being only 0.46 and 0.1 per cent respectively. A similar pattern was observed in the results for the consumer prices of coconut products for similar simulations done. Consumer prices declined by 3.01 per cent for fresh nuts, 1.33 per cent for copra, and 1.03 per cent for desiccated coconut on complete removal of the export "CESS" charged. For the other simulations (30 and 50 per cent-increase or decrease of export "CESS") the changes in consumer prices were insignificant. The effect of various simulations on export prices of coconut products showed that the impact of complete removal of export "CESS" was the only simulations that created significant changes. The export price increased for fresh nuts by 3.11 per cent, 1.35 per cent for copra, and 1.04 per cent for desiccated coconut; while prices of coconut oil and coconut milk powder exhibited marginal increases. The analysis of the effect of export "CESS" changes on commodity supply and input demand by processing industries showed that all the simulations had no significant impact on the supply of all the coconut products exported, and also on the demand for fresh nuts as input by the processors.

Table 1. Effect of Export "CESS" Rate Simulations on Producer Prices

		SL COCO MODEL BASE LEVEL & SIMULATION RESULTS									
		1) Effect on Producer Price									
				Changes of Export "CESS" Rates							
VARIABLES	Base			Simulation Values							
	Level	Zero Tax		30% Incre		30% Reduc		50% Incre		50% Reduc	
1. Producer P Rs/MT		PP	PPGR	PP	PPGR	PP	PPGR	PP	PPGR	PP	PPGR
a. FNUTS	23380	24130	3.208	23155	-0.9624	23605	0.962	23005	-1.604	23755	1.6039
b.COPRA	65800	66700	1.368	65530	-0.4103	66070	0.41	65350	-0.684	66250	0.6839
c.DC	95600	96600	1.046	95300	-0.3138	95900	0.314	95100	-0.523	96100	0.523
d.CNOIL	97500	97950	0.462	97365	-0.1385	97635	0.138	97275	-0.231	97725	0.2308
e.CMP	395100	395500	0.101	394980	-0.0304	395220	0.03	394900	-0.051	395300	0.0506
Source: CIMS Simulation		* PP GR = Producer Price Growth Rate									

Table 2. Effect of Export "CESS" Rate Simulations on Consumer Prices

		SL COCO MODEL BASE LEVEL & SIMULATION RESULTS									
		2) Effect on Consumer Price									
	BASE			Changes of Export "CESS" Rates							
VARIABLES	Values			Simulation Values							
	Level	Zero Tax		30% Incre		30% Reduc		50% Incre		50% Reduc	
2.Consumer P Rs/MT	PC	PC	PCGR	PC	PCGR	PC	PCGR	PC	PCGR	PC	PCGR
a. FNUTS	24880	24130	-3.014	25105	0.9043	24655	-0.904	25255	1.507	24505	-1.507
b.COPRA	67600	66700	-1.331	67870	0.3994	67330	-0.399	68050	0.666	67150	-0.666
c.DC	97600	96600	-1.025	97900	0.3074	97300	-0.307	98100	0.512	97100	-0.512
d.CNOIL	98400	97950	-0.457	98535	0.1372	98265	-0.137	98625	0.229	98175	-0.229
e.CMP	395900	395500	-0.101	396020	0.0303	395780	-0.03	396100	0.051	395700	-0.051
Source: CIMS Simulation Output		* PCGR = Consumer Price Growth Rate									

Table 3. Effect of Export "CESS" Rate Simulations on Export Prices

		SL COCO MODEL BASE LEVEL & SIMULATION RESULTS									
		3) Effect on Export Price									
	BASE			Changes of Export "CESS" Rates							
VARIABLES	Values			Simulation Values							
	Level	Zero Tax		30% Incre		30% Reduc		50% Incre		50% Reduc	
1. Producer P Rs/MT		XP	XPGR	XP	XPGR	XP	XPGR	XP	XPGR	XP	XPGR
a. FNUTS	24130	24880	3.1082	23905	-0.932	24355	0.932	23755	-1.5541	24505	1.554
b.COPRA	66700	67600	1.3493	66430	-0.405	66970	0.405	66250	-0.6747	67150	0.675
c.DC	96600	97600	1.0352	96300	-0.311	96900	0.311	96100	-0.5176	97100	0.518
d.CNOIL	97950	98400	0.4594	97815	-0.138	98085	0.138	97725	-0.2297	98175	0.23
e.CMP	395400	395900	0.1265	395380	-0.005	395620	0.056	395300	-0.0253	395700	0.076
Source: CIMS Simulation Output		* XPGR = Export Price Growth Rate									

Table 4. Effect of Export "CESS" Rate Simulations on Supply

		SL COCO MODEL BASE LEVEL & SIMULATION RESULTS									
		4) Effect on Commodity Supply & Input Demand									
						Changes of Export "CESS" Rates					
VARIABLES	Base			Simulation Values							
	Level	Zero Tax		30% Incre		30% Reduc		50% Incre		50% Reduc	
3.Supply Com Thou MT		SUP	SGR	SUP	SGR	SUP	SGR	SUP	SGR	SUP	SGR
a. FNUTS	2145	2145	0	2145	0	2145	0	2145	0	2145	0
b.COPRA	26.01	26.048	0.146	25.996	-0.054	26.02	0.0384	25.988	-0.085	26.028	0.0692
c.DC	45.38	45.441	0.134	45.361	-0.042	45.398	0.0397	45.349	-0.068	45.41	0.0661
d.CNOIL	21.44	21.461	0.098	21.439	-0.005	21.449	0.042	21.436	-0.019	21.452	0.056
e.CMP	6.453	6.456	0.046	6.452	-0.015	6.454	0.0155	6.451	-0.031	6.455	0.031
4.INDEM Input Thou MT		ID	IDGR	ID	IDGR	ID	IDGR	ID	IDGR	ID	IDGR
a.FNUTS	613.67	615.08	0.23	613.25	-0.298	614.097	0.0689	612.969	-0.115	614.379	0.1149
Source: CIMS Simulation Output		* SGR = Supply Growth Rate			* IDGR = Input Demand Growth Rate						

Table 5. Effect of Export "CESS" Rate Simulations on Export Demand

						SL COCO MODEL BASE LEVEL & SIMULATION RESULTS							
				5) Effect on Export Demand									
				Changes of Export "CESS" Rates									
VARIABLES		Base		Simulation Values									
		Level	Zero Tax		30% Incre		30% Reduc		50% Incre		50% Reduc		
5. EXPTDD Xp	Thou MT		XD	DXGR	XD	XDGR	XD	XDGR	XD	XDGR	XD	XDGR
a. FNUTS		45.722	45.757	0.077	45.712	-0.022	45.733	0.0241	45.705	-0.0372	45.74	0.039
b.COPRA		18.755	18.776	0.112	18.749	-0.032	18.762	0.0373	18.744	-0.0587	18.766	0.059
c.DC		41.81	41.855	0.108	41.793	-0.041	41.822	0.0287	41.783	-0.0646	41.831	0.05
d.CNOIL		1.765	1.767	0.113	1.765	0	1.766	0.0567	1.765	0	1.766	0.057
e.CMP		4.211	4.214	0.071	4.21	-0.024	4.212	0.0237	4.21	-0.0237	4.213	0.047
Source: CIMS Simulation Output				* XD GR = Export Demand Gro								

Table 6. Effect of Export "CESS" Rate Simulations on Consumption Demand

			SL COCO MODEL BASELINE & SIMULATION RESULTS - GAMS P									
				6) Effect on Consumption Demand								
				Changes of Export "CESS" Rates								
VARIABLES		Base		Simulation Values								
		Level	Zero Tax		30% Incre		30% Reduc		50% Incre		50% Reduc	
6.CONDD	Thou MT		CD	CDGR	CD	CDGR	CD	CDGR	CD	CDGR	CD	CDGR
a. FNUTS		2099.28	2099.243	-0.002	2099.288	0.00038	2099.267	-0.0006	2099.295	0.0007	2099.26	-0.001
b.COPRA		7.253	7.272	0.262	7.248	-0.0689	7.259	0.08272	7.244	-0.124	7.262	0.12409
c.DC		3.572	3.586	0.3919	3.568	-0.112	3.576	0.11198	3.566	-0.168	3.579	0.19597
d.CNOIL		19.679	19.694	0.0762	19.674	-0.0254	19.683	0.02033	19.671	-0.041	19.686	0.03557
e.CMP		2.242	2.242	0	2.242	0	2.242	0	2.242	0	2.242	0
Source: CIMS Simulation Output			* CDGR = Consumer Demand Growth Rate									

Table 7. Effect of Export "CESS" Rate Simulations on Stakeholder Income/Revenues

			SL COCO MODEL BASELINE & SIMULATION RESULTS - GAMS PROGRAM (									
				7) Effect on Stakeholder Income Levels								
				Changes of Export "CESS" Rates								
VARIABLES		Base		Simulation Values								
		Level	Zero Tax		30% Incre		30% Reduc		50% Incre		50% Reduc	
7. INCTOT	Rs. Milln		INC	INCGR	INC	INCGR	INC	INCGR	INC	INCGR	INC	INCGR
a. Industry Income		68976.02	70780.89	2.616663	68434.59	-0.78495	69517.49	0.785012	68073.63	-1.30827	69878.41	1.308266
8. PRODINC												
Producer Income	Rs. Milln		PINC	PINGR	PINC	PINGR	PINC	PINGR	PINC	PINGR	PINC	PINGR
a. FNUTS		50150.1	51758.85	3.20787	49667.475	-0.96236	50632.725	0.962361	49345.73	-1.60393	50954.475	1.603935
b.COPRA		1711.34	1737.39	1.522199	1703.53	-0.45637	1719.147	0.456192	1698.33	-0.76022	1724.36	0.760807
c.DC		4338.29	4389.57	1.1820326	4322.93	-0.35406	4353.66	0.354287	4312.69	-0.59009	4363.91	0.590555
d.CNOIL		2090.81	2102.07	0.5385473	2087.44	-0.16118	2094.18	0.161182	2085.19	-0.2688	2096.43	0.268795
e.CMP		2549.61	2553.49	0.1521801	2548.45	-0.0455	2550.77	0.045497	2547.68	-0.0757	2551.547	0.075972
TOTPRODINC		60840.15	62541.37	2.7962127	60329.825	-0.8388	61350.482	0.838808	59989.62	-1.39797	61690.722	1.398044
CHG IN PROD INCOME			1701.22		-510.325		510.332		-850.53		850.572	
9. XFIRMINCO			XFINC	INGR	XFINC	INGR	XFINC	INGR	XFINC	INGR	XFINC	INGR
Expt Firm Income	Rs.Milln	8135.87	8239.49	1.2736192	8104.76	-0.38238	8166.97	0.382258	8084.01	-0.63742	8187.69	0.636932
10. GREV0			GREV	RVGR	GREV	RVGR	GREV	RVGR	GREV	RVGR	GREV	RVGR
Govt. Revenue	Rs.Milln	95.46	0	-100	124.06	29.96019	66.84	-29.9811	143.114	49.92039	47.75	-49.979
thru Expt.'CESS'												
Source: CIMS Simulation Output			* INCGR =Industry Income Growth Rate			*PINGR =Producer Income Growth Rate						
			* XFINGR = Exprt Firms Income Growth Rate				* RVGR = Govt. Revenue Growth Rate					

This result was as expected since the export "CESS" rates are only a small percentage of the prices of the commodities exported, and that the supply of fresh nuts was independent of this tax by not having any change. When the export demand for coconut products was analyzed for the different simulations, the results indicated that export "CESS" changes, even in the case of complete removal, had no significant effect on the export demand for coconut products. This implies that using the export "CESS" rate to change export demand for coconut products would not be an effective policy tool for the government. The effect of export "CESS" changes on consumption demand for the different coconut products was analyzed. The impact of different simulations on the consumption demand for all the coconut products showed no significant changes, ranging from very low values to 0.39 per cent for desiccated coconut. This was mainly due to the fact that the domestic consumption of all the coconut products was solely determined by the household and industry demand, which are rather constant. The effect of export "CESS" changes on stakeholders' income levels (mainly incomes of producers, processors, exporting firms, and government) was analyzed through simulations of the Multi-Market model. The

results indicated that 30 per cent, 50 per cent and 100 per cent reduction in export "CESS" rates caused positive growth rates in the industry income, all coconut products suppliers' income, exporting firms' income, and government tax revenue. The highest income growth rates were observed for the coconut industry of 2.62 per cent, 3.21 per cent for fresh nut producers, 1.52 percent for copra producers, 1.18 per cent for desiccated coconut producers; when simulation of complete removal of export "CESS" on coconut products exported was executed in the CIMS model. Thus, the results of the simulations carried out through the CIMS model clearly indicate that any policy change with regard to the export "CESS" rates charged on coconut products exported will only give significant positive impact on the stakeholders income levels only if the current export "CESS" rates are completely removed. Nevertheless, this policy action could cause a loss of export tax revenue to the government, but the implications of the policy would be beneficial to many of the stakeholders, particularly coconut products producers.

Policy Implications

The imposing of an export 'cess' on coconut products has various implications to all stakeholders in the coconut industry and the government. But it is essential to look into the development of the coconut industry in the long-run which urgently needs heavy investment either by the government or the private sector participants, especially the exporters and processors of coconut products. Sri Lanka's coconut products exports have to be competitive on one side, as well as the industry needs investment to modernize production and exports, which the government and other stakeholders have a major role to play.

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