

# Status of Custom Hiring System of farm Machinery in Sri Lanka

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# Sri Lanka and her Agricultural Background

- “ Land area - 60,600 km<sup>2</sup>
- “ Population - 20.3 million
- “ Arable area - 30 % of the total land area
- “ Avg land holding size - 1.0 ha
- “ Main crops - Paddy, Maize, Vegetable, Fruits, Spices, Grain Legumes, oil crops and root crops
- “ Plantation crops - Tea, Coconut, Rubber, Sugarcane

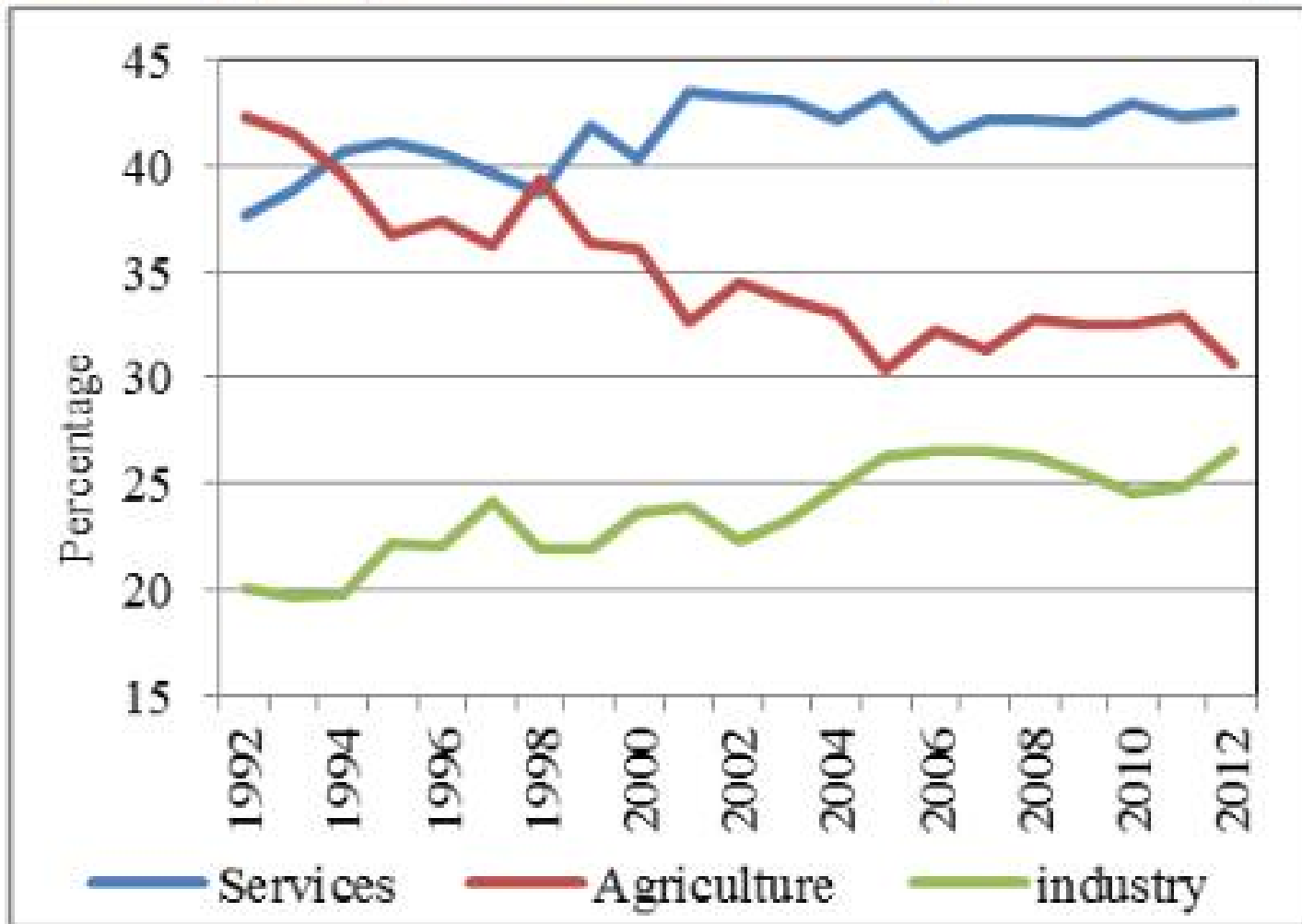
# Sri Lanka and her Agricultural Background.....

- “ Families engaged in Agriculture - 1.8 mill (49%)
- “ Agricultural contribution to GDP - 11.1 %
- “ Paddy cultivated area - 34 % of the arable  
land
- “ Average yield (PADDY) - 4.5 MT/ha

# Labour and employment

Age group	Labour distribution rate	Un employment rate
0 - 14	26	-
15 - 19	62	19
20 - 29		11.3
30 - 39		2.5
40 - 49		0.8
50 and above	12	

## Employed population by major industry group - 1992 - 2012



# Daily Wage rate variation from 2003 – 2012

Operation	Wage rate in 2003 (\$)	Wage Rate in 2012 (\$)
Ploughing	2.44	6.59
Sowing	2.30	6.33
Transplanting (F)	1.78	4.66
Spraying	2.54	6.63
Weeding (F)	1.84	-
Harvesting	2.17	6.18

# Paddy area cultivated and avg yield

Year	Cultivated Paddy area (000ha)	Average Yield Kg/ha
2003	983	3761
2004	779	4086
2005	937	3963
2006	910	4137
2007	816	4389
2008	1053	4187
2009	978	4336
2010	1063	4528
2011	1223	3970
2012	1067	4535





# Situation of Farm Mechanization

- “ Labour shortage in peak demanding period
- “ Cultivated area increased
- “ Bulk to handle is increased with increased yield
- “ Timely cultivation is encouraged
- “ Consumer is more quality concerned
- “ With the limited resources Productivity improvement is identified as a priority

**Solution**



**Mechanization**

# Machinery Supply Chain

- “ Very few machinery are locally produced like water pumps, sprayers, seeders and hand tools
- “ Majority is imported
- “ However supply of machinery is not regulated
- “ Inferior quality machinery inflows to the country
- “ Local production also not supported by unfavorable trade policy and small local market

# Annual Sales of Major Farm Machinery in the Country

Year	2 wheel Tractors	4 Wheel Tractors	Combine Harvesters	Sprayers	Trans planters
2011/12	14445	7184	2160	26093	n/a
12/13	9664	5141	1099	6240	23
13/14 Aug	2783	1479	N/a	N/A	87

# Level of Mechanization

- “ Paddy Cultivation - Highly mechanized
- “ Vegetable cultivation - Low level
- “ Other field crops - Moderately  
mechanized
- “ Fruit sector - Low level
- “ Plantation crops - Low level
- “ Spices - Very low

# Paddy Cultivation

- “ Most of the operations are mechanized
- “ Least mechanized areas
  - Land leveling
  - Bund cleaning and plastering
  - Plant establishment and weed management
  - Small scale seed paddy processing
  - Drying & Storage



# History of custom hiring

- “ Government owned tractor hiring centres established in late 60’s
- “ Objective was to introduce tractors
- “ Closed down all the centres in late 70’s
- “ As a major break through, tractors (both four wheel and power tillers) have been introduced to the country
- “ Farm machinery research and training programs initiated

# History of custom hiring...

- “ Individual tractor and sprayer owners emerged
- “ Hired tractors and sprayers in the close proximity
- “ Hiring system was not sustained due to various social problems (Irregularity, close relations etc)
- “ Number of Machinery owners increased gradually
- “ Need of high capacity machinery was identified

# Limiting Factors in Owning machinery

- “ Poor purchasing power of individuals
- “ Seasonal usage of some machinery
- “ Lack of infrastructural facilities
- “ Many machines are single purpose and having considerably un-matching capacity
- “ Lack of after sales services in the close proximity
- “ Owning is not economical



# Present status of custom hiring

## “ Common hiring machines

- Combine harvester
- Combine thresher
- Four wheel tractor
- Sprayer
- Two wheel tractor
- Reaper
- Water pump

# Present status of custom hiring...

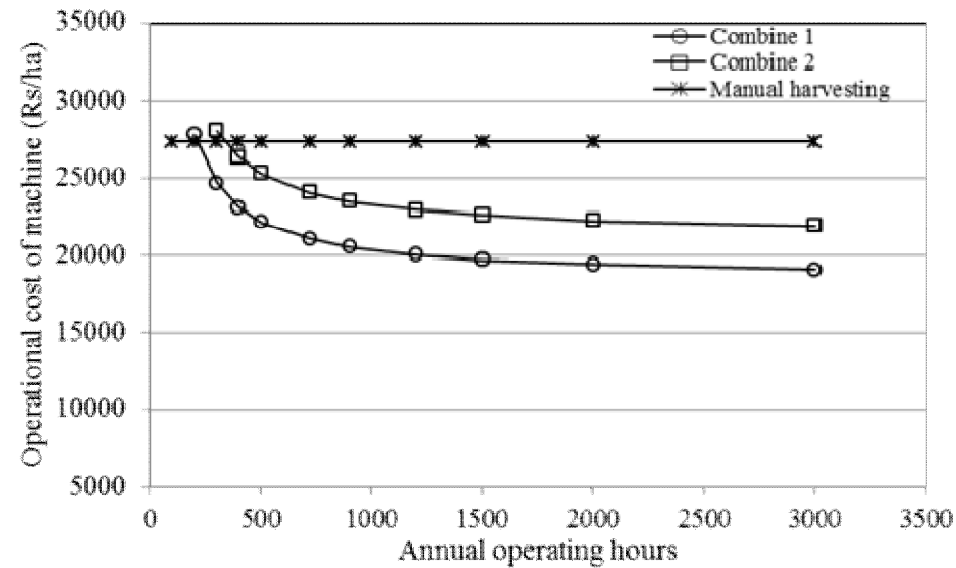
## “ Hiring rates

Operation	Hiring rate (\$)
Ploughing	120 . 140 /ha
Reaping	95 . 115 /ha
Threshing	25 . 30 /h
Combine harvesting	200 . 225 /ha*

\* Now it has been reduced up to \$ 100/ha



# Break Even Analysis of Combine Harvesting



Average Break even point is around 100 ha/year

# Present status of custom hiring...

## “ Challenges and Constrains

- Non availability of hiring machines at close proximity to the farmers
- Lack of awareness of available technology (both parties)
- High and inconsistent hiring charges
- Some private machine owners are reluctant to hire their machinery
- Insufficient machinery to carter the demand
- Financial hardships to pay hiring cost in time (harvesting period)
- Only High profit margin machines are available
- Excepted quality of work is not guaranteed (In combine harvester operations rate of grain loss is high as 20% - 30%)

# Solutions and Suggestions

- “ Establish Government supported private machinery hiring centres
- “ Support those centres by providing subsidy or providing soft loans
- “ Train machinery operators free of charge
- “ Decide and implement scientific hiring rates with reasonable profit margins
- “ Expose machinery owners to the latest technology
- “ Introduce effective regulatory system by safeguarding all relevant stake holders.

A high-contrast, yellow and black image of a hand holding a tool, possibly a shovel or pickaxe, with the text "Thank You!" overlaid in green. The image is heavily stylized, with a grainy, high-contrast appearance. The text "Thank You!" is written in a bold, green, sans-serif font with a blue outline, centered over the image. The background is a mix of yellow and black, suggesting a bright, high-contrast scene. The tool being held is a shovel or pickaxe, and the hand is visible at the top left. The overall composition is simple and direct, focusing on the message of gratitude.

Thank You!