THAILAND's NEW S-CURVE: THE POTENTIAL OF 4 EXISTING INDUSTRIES

An Analysis Using Global Input-Output Table

Introduction

- THAI ECONOMIC ministers will shortly embark on an international roadshow to promote foreign investment in Thailand's 10 "future" industries, according to Deputy Prime Minister Somkid Jatusripitak.
- "Next year is the year of investment. We've already provided a lot of incentives and confidence has returned due to various stimulus measures implemented in the past three months.
- "If the private sector does not invest next year, then what are you saving the money for?" Somkid asked. The Cabinet approved a list of **10 industries** as Thailand's new economic growth engines, including next-generation cars; smart electronics; affluent, medical and wellness tourism; agriculture and biotechnology; food; robotics for industry; logistics and aviation; biofuels; and biochemical, digital and medical sectors.

Source: http://www.nationmultimedia.com/business/Somkid-to-lead-roadshow-seeking-investments-in-10--30273275.html

Introduction

- The Finance Ministry is currently working on details of **extra tax and non-tax incentives** for the **10 targeted industries**. In order to attract investors, the incentives will go beyond the Board of Investment's privileges that they already receive.
- The measures could include the establishment of funds to support private investment, corporate income-tax exemption for 10-15 years and reduction or exemption from personal income tax for researchers or experts.

Source: http://www.nationmultimedia.com/business/Somkid-to-lead-roadshow-seeking-investments-in-10--30273275.html

Introduction

- "**The new economic S-curve [future industries] has been identified [for Thailand] and we will show and elaborate during the roadshow**," Somkid said.
- Somkid said the private sector has to **invest** in order to **increase the country's competitiveness** and for gross domestic product to expand.
- He believes the economy this year **could expand more than 3 per cent** due to stimulus measures worth around Bt500 billion.
- "If GDP is to expand by 5 per cent, the private sector must invest more than 10 per cent of GDP per year," he said.

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Infrastructure problem..low investment..slow economic growth..unable to compete

The past 10 years: low investment..hinder growth rate

Lower investment growth rate **9% → 2%**
Investment for repair or improvement...not...for building a new things

Lower rate of GDP growth **5%→ 3%**
Low income and Thai's exporter competitiveness

The past 10 years: low FDI to Thailand

Share of FDI in Thailand compare to ASEAN countries from
30%→ 20%
Lower 6%annually

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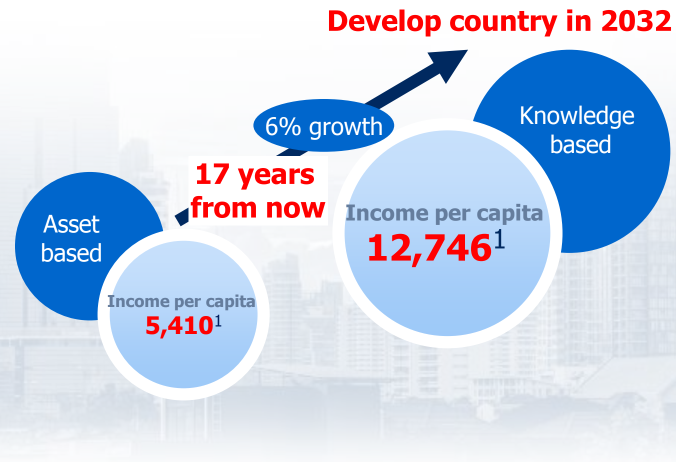
Thailand's mission: increase investment 10% annually for enhancing power of the country

Increase in investment 10 % → increase in GDP 5-6%

Condition

1) It has to be investment that double up **"create value add"**
   → Future industry (Agricultural–Industry–Service)
2) It has to be investment that **"generate balancing"**
   → Planning for future industry (human-environment-technology)
   → Reduce income distribution problem (expand the investment to outside Bangkok)

For escalating to be developed country in 2032…Thailand needs 6% GDP growth per year



1 USD per capita/Year

Remarks: Past (2000-5) investment 1% GDP increase 0.7%
Now (2006-14) investment 1% GDP increase only 0.3%

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5+5 Target industries.. Enhance existing 5 industries +new 5 industries

Analysis
4 world trends..with Thailand
- 12 new technologies
- Networking of economic-social-human
- Urbanisation
- Aging society

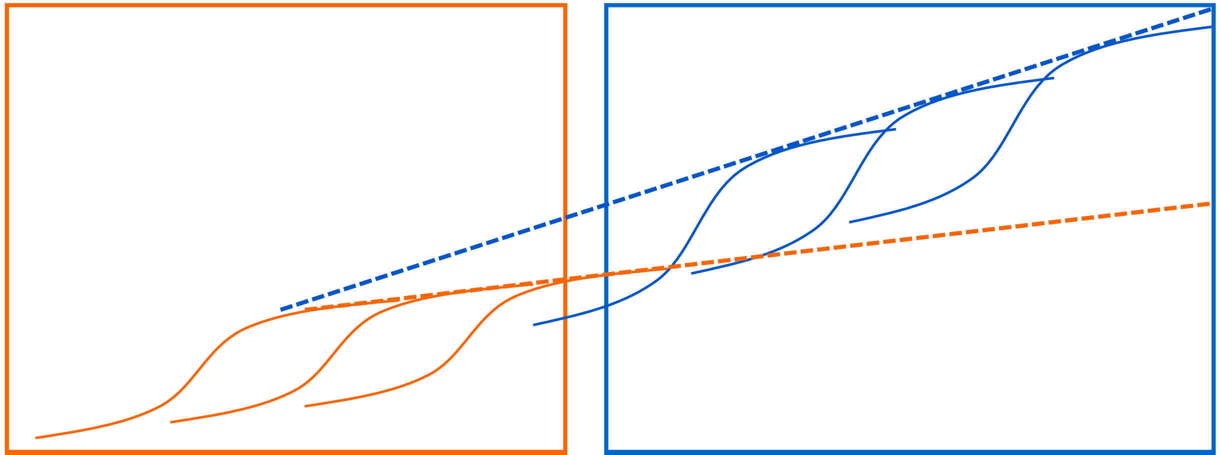
Interview **Investor** 70+
- Domestic and International
- Target leading investor and owner of technologies (China-Japan-South Korea-EU-USA)

Consult 15 related agencies
- Working on promoting private investment

Present Deputy Prime Minister Finance Minister

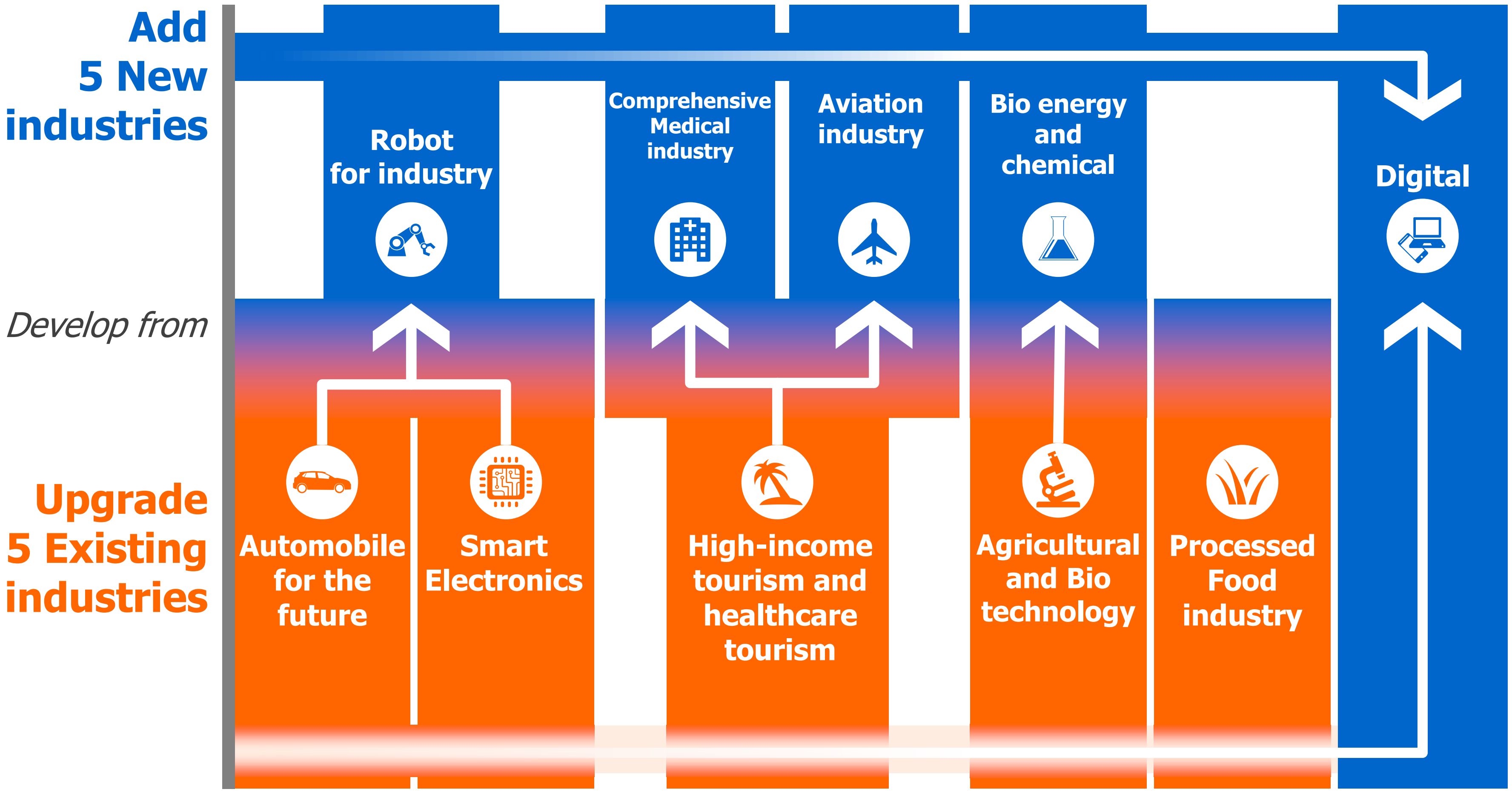
Present H.E. Prime Minister

ST to MT | LT



① First S-Curve: Upgrade existing industry for future growth	② New S-Curve: Develop new industries for escalating Thailand's economy
Automobile for the future	Robot for industry
Smart electronics	Aviation industry
World Class Tourism	Bio industries: energy-bio chemical
Efficient Agriculture – Bio technology	Digital industry
Food for the future	Medical and health industry

New industries development stems from advancement of the existing industries



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Research Methods

We can apply analytical techniques to examine Thailand's competiveness of existing 4 export sectors that are on the S-Curve strategy. These techniques include:

(1) Global Backward and Forward Multipliers (comparing 2000 and 2011)

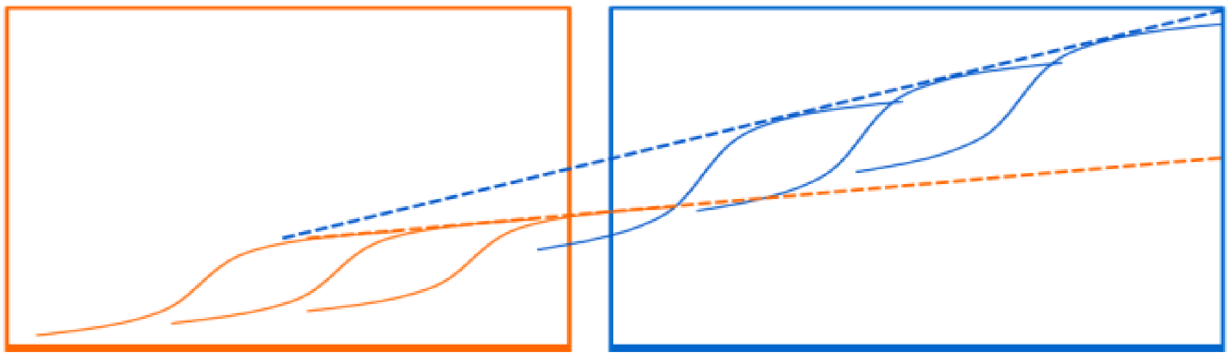
(2) Local Backward and Forward Multipliers (comparing 2000 and 2011)

(3) Sectors' share on Thailand's GDP (comparing 2000 and 2011)

New S-Curve Industries

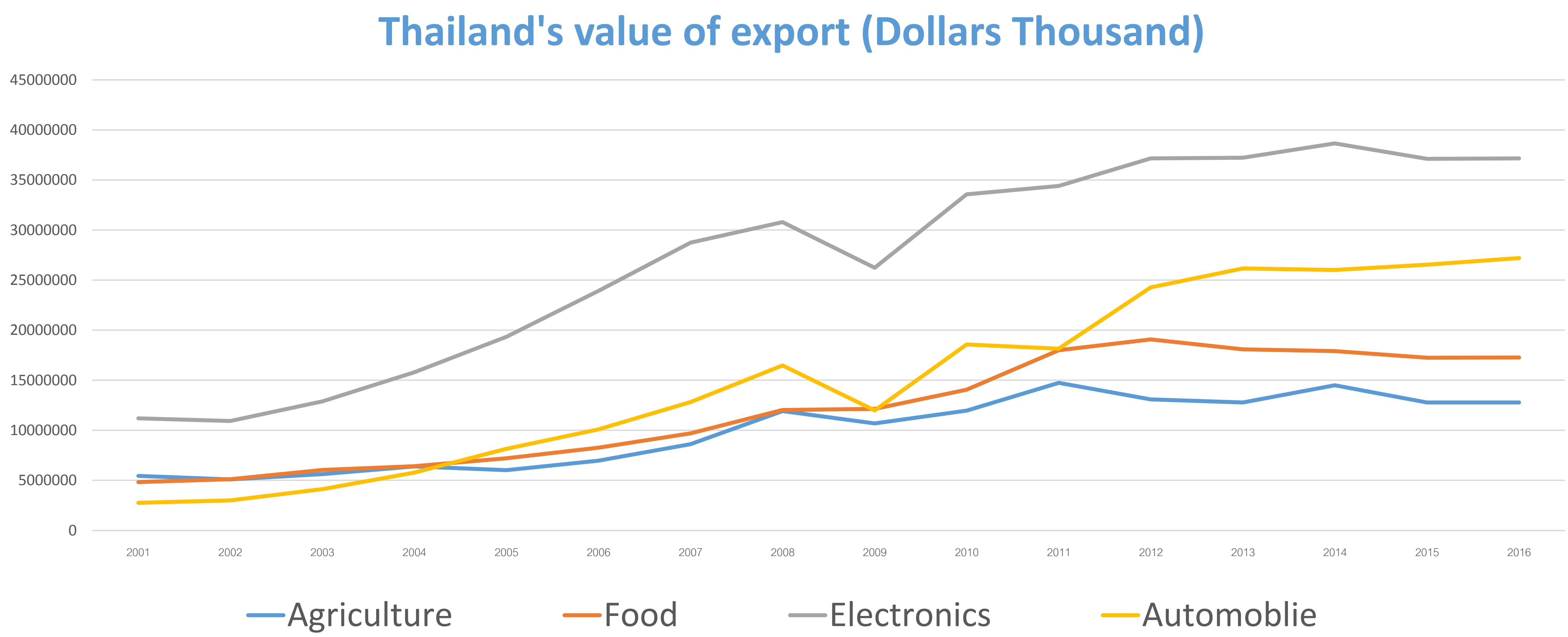
10 Targeted Industries and New S-Curve

Short-Run Long-Run



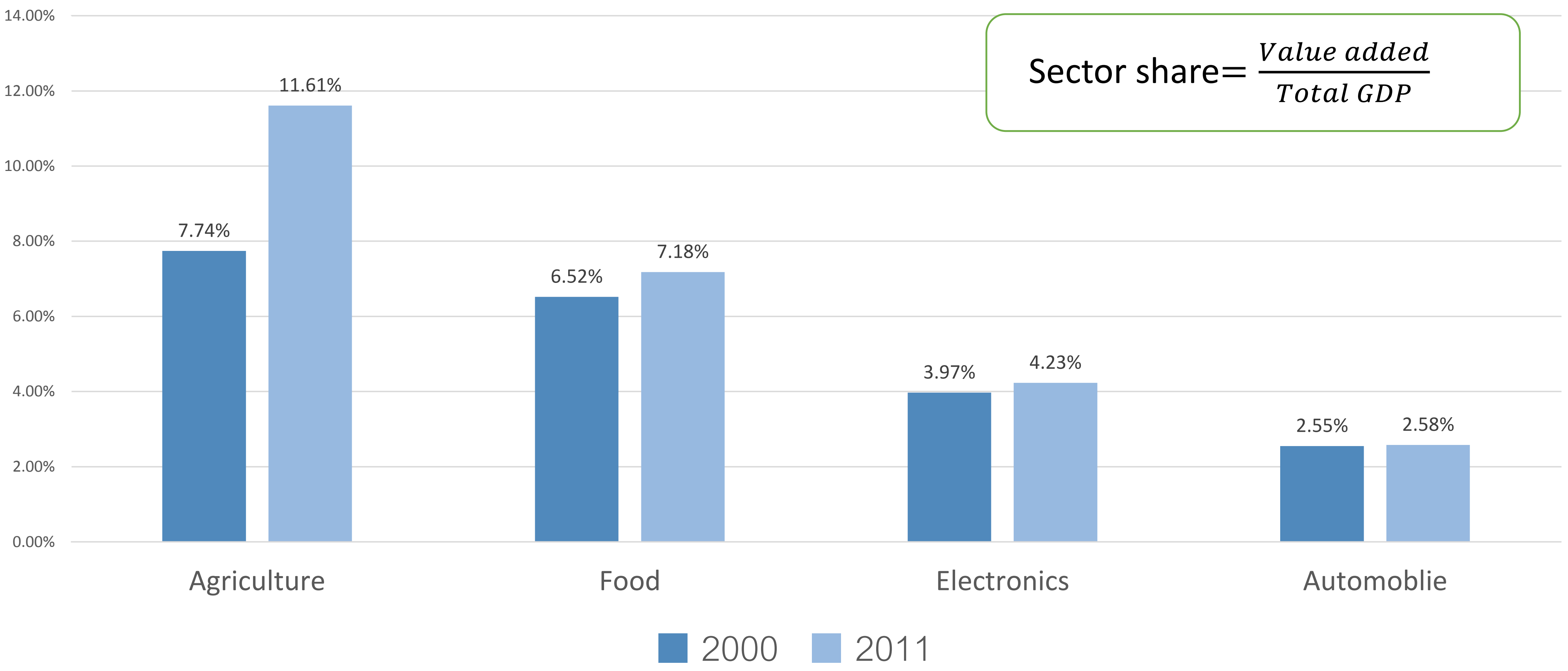
(1) <u>Automobile</u>
(2) <u>Electronics</u>
(3) Tourism
(4) <u>Agriculture</u>
(5) <u>Food</u>

(1) Robotics
(2) Aerospace
(3) BioChemical
(4) Digital Content
(5) Healthcare



- **Electronics** has the largest export size in the case of Thailand.
- In 2008, there was a **global financial crisis** which cause all export of 4 sectors drop, but the volatilities are different.
- In overall sectors, the value of export are increased.

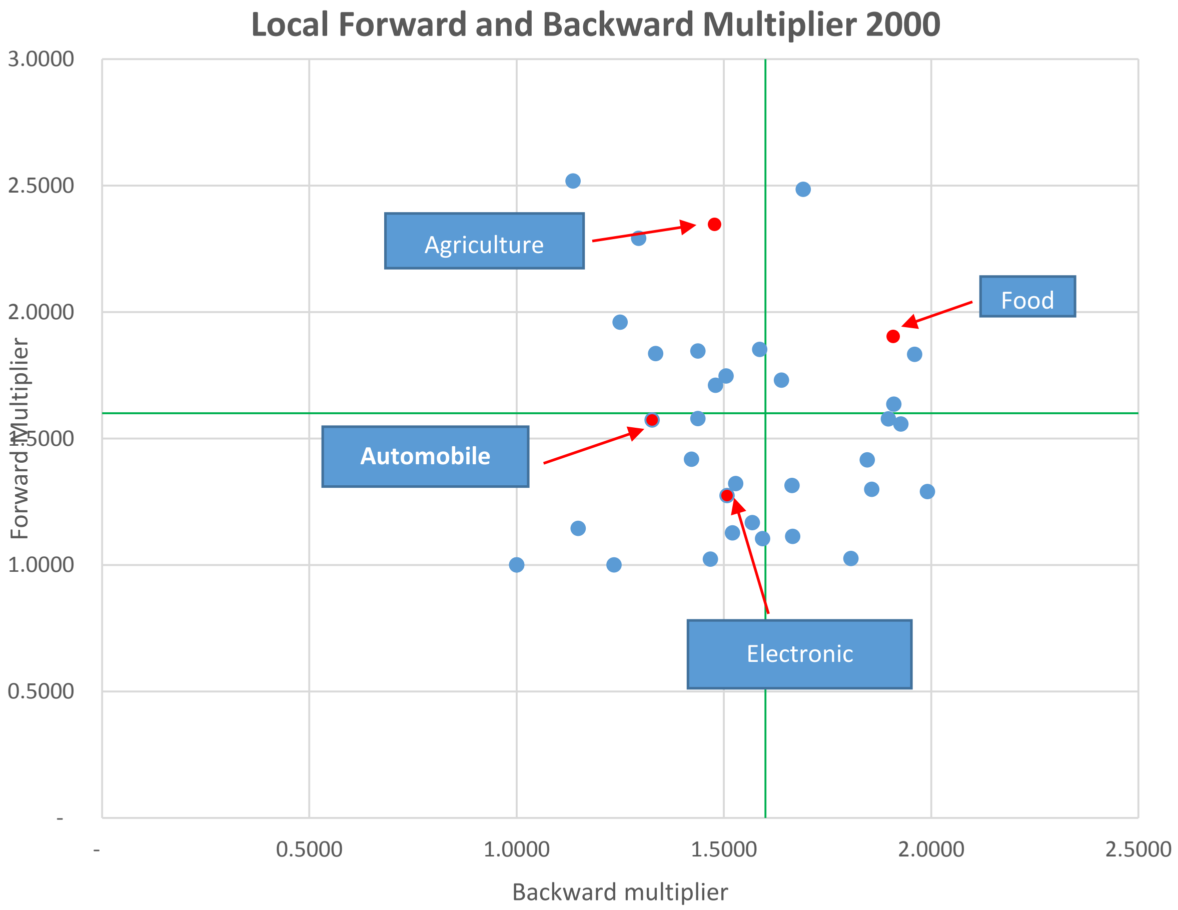
SECTORS' SHARE ON THAILAND'S GDP



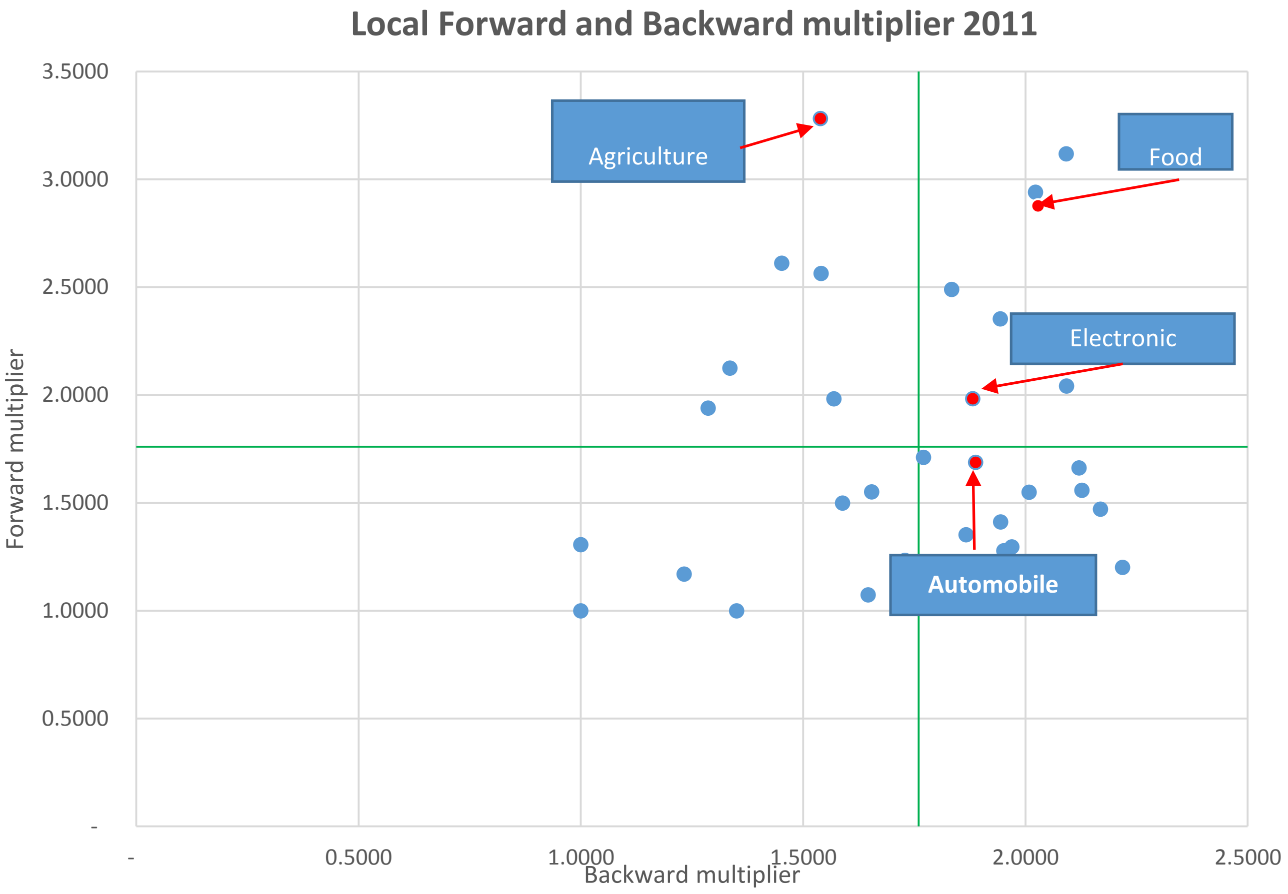
$$\text{Sector share} = \frac{Value\ added}{Total\ GDP}$$

All 4 sectors have a growth in share on Thailand's GDP during 2000-2011.

Local Forward and Backward Multiplier 2000 and 2011



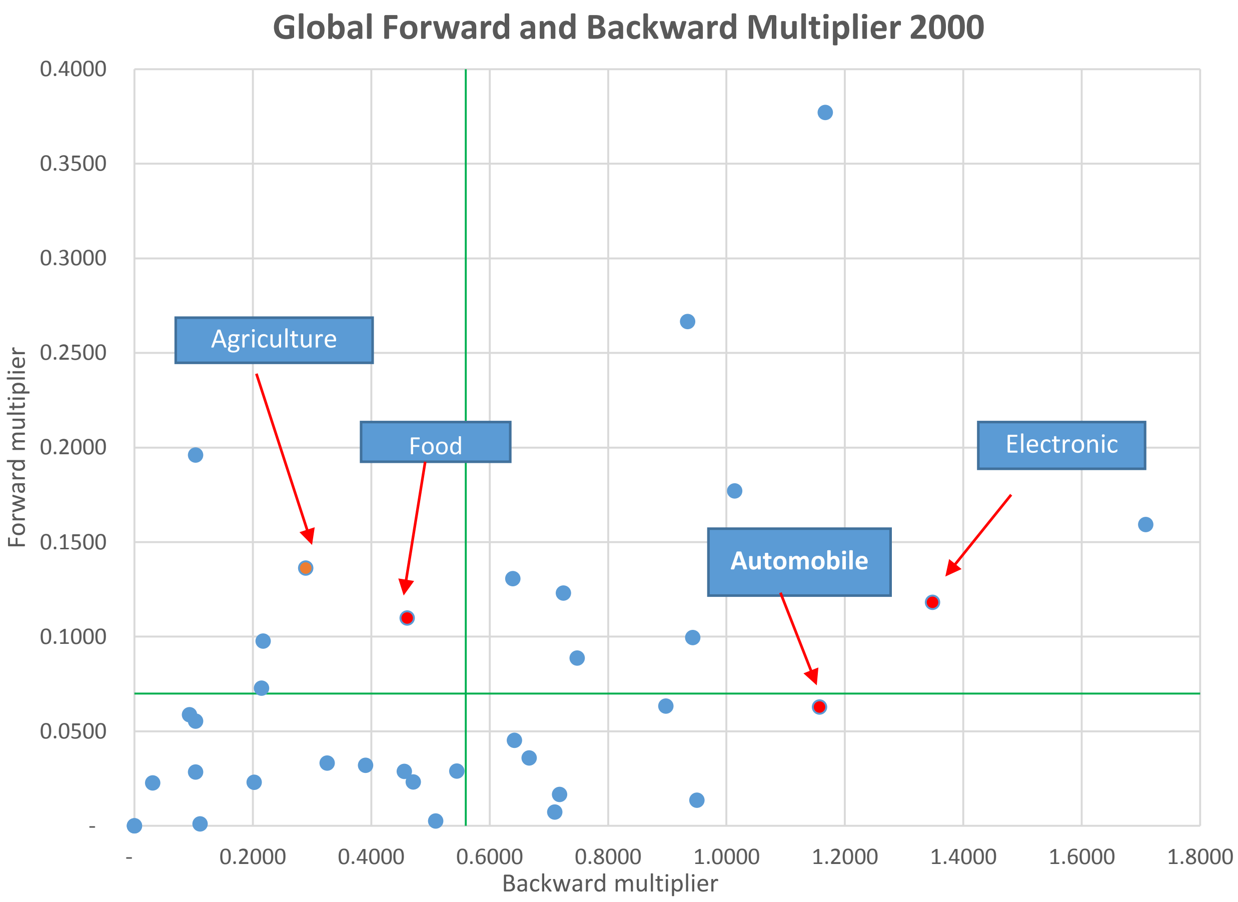
High forward-High backward : Food
High forward-Low backward : Agriculture
Low forward-low backward : Automobile and electronic



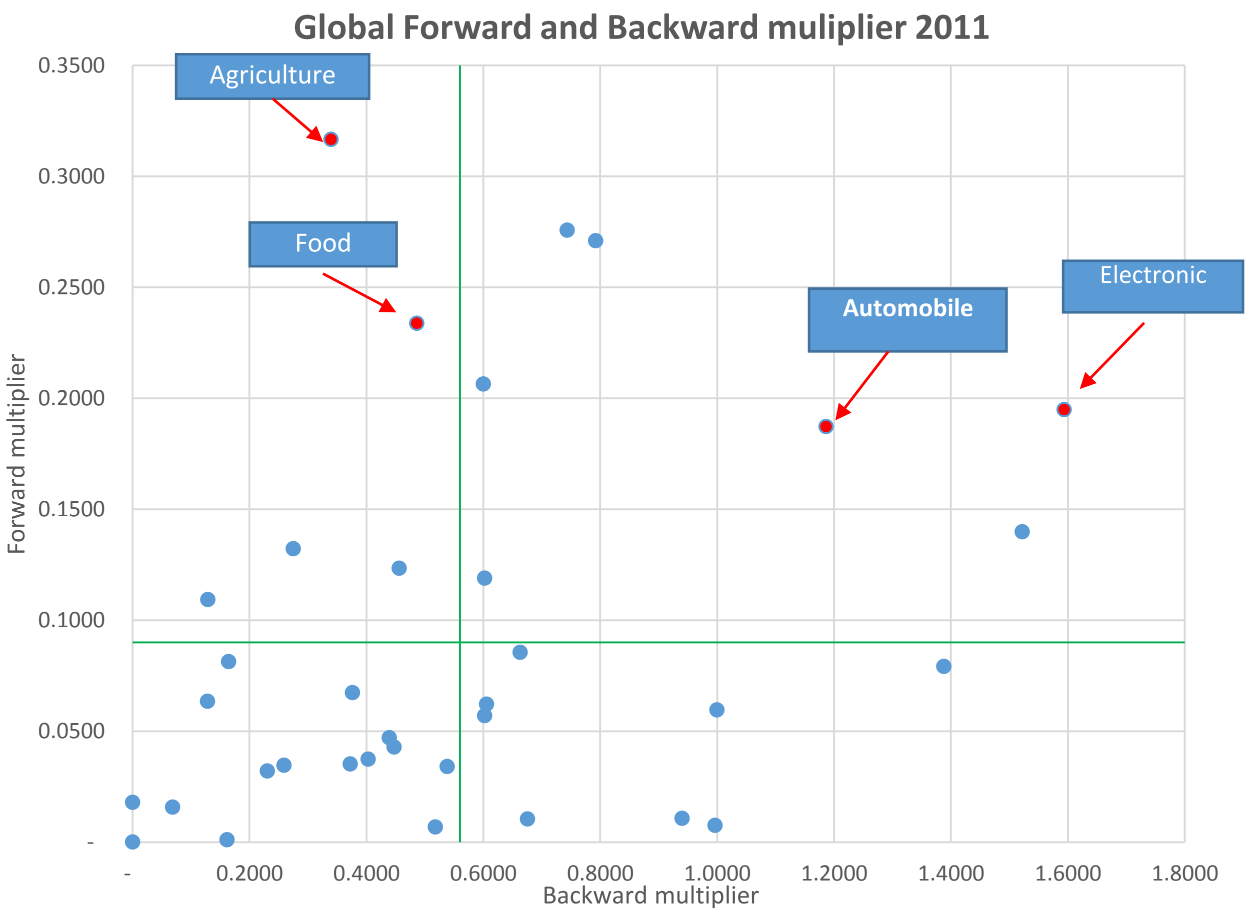
High forward-High backward : Electronic, food
High forward-Low backward : Agriculture
Low forward-High backward : Automobile

Global Forward and Backward Multiplier 2000and 2011

Backward Multiplier: Contribution to value of production of upstream industry from investment in a particular sector
Forward Multiplier: Contribution to value of production of downstream industry from investment in a particular sector

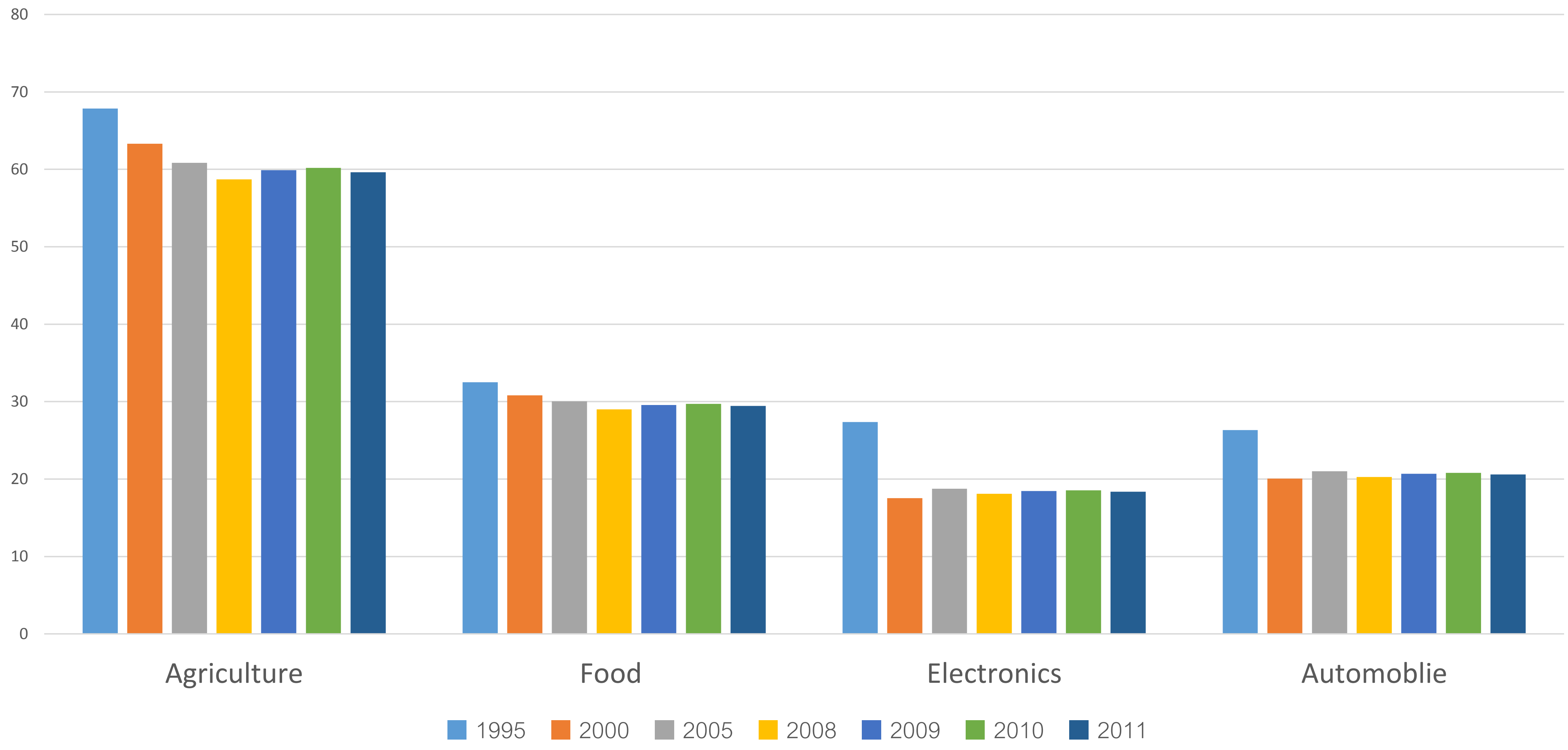


High forward-High backward : Electronic
High forward-Low backward : Agriculture, food
Low forward-High backward : Automobile



High forward-High backward : Electronic, Automobile
High forward-Low backward : Agriculture, food

Thailand's value added (% of production)



Main contributions of each sector

Agriculture: Highest sector's share on Thai GDP

Electronics: Highest export value

Food: Second highest sector's share on Thai GDP

Automotive: Second highest increasing in historical export trend

GDP calculation back up

Value add to gross output ratio
Indirect multiplier[2]
Induced multiplier[1]

Sectors	Baseline in 2014: Real GDP in 2014 USD mn.	Normal case from HIS in 2030: Real GDP in 2014 USD mn.	Normal case from HIS in 2030: CAGR 2014-2030	Global top decide	New GDP 2030, in 2014 USD mn.: Real GDP 2030	New GDP 2030, in 2014 USD mn.: Increase fr. 2014	Indirect/Induced effect: Increase fr. 2030	Indirect/Induced effect: Increase fr. 2030 (THB mn)	VA/ GO ratio	Gross output (THB mn)	Indirect / Induced multiplier	Multiplier (THB mn)	Total multiplier, USD 2005
Agriculture	30,697.19	43,981.51	2.27%	3.73%	33,616.99	24,464.11	11,179.78	279,583.23	× 0.39 =	463,887.67	0.40 0.45	184,304.44 209,156.24	9,765.42 13,251.22
Food	15,226.95	27,404.81	3.74%	5.07%	33,616.99	18,390.04	6,212.18	155,353.82	× 0.01 =	492,795.23	0.68 0.40	337,441.40 196,466.39	
Mining	2,755.54	4,296.04	2.81%		4,296.04								
Oil & gas	6,874.03	3,289.69	-4.50%		3,289.69								
Textile & apparel	4,329.90	5,976.76	2.04%		5,976.76								
Chemicals	4,552.13	6,845.22	2.58%		6,845.22								
Rubber & plastic products`	6,179.09	10,492.13	3.36%		10,492.13								
Mineral-based products	6,092.67	10,913.39	3.71%		10,913.39								
Basic & fabricated metals	3,493.85	6,898.44	4.34%		6,898.44								
Electronics	18,303.87	34,334.15	4.01%	6.12%	47,327.68	29,023.81	12,993.53	324,941.32	× 0.03 =	1,237,008.73	0.74 0.39	912,067.42 478,644.61	34,516.51
Automotive	21,144.70	43,006.86	4.54%	5.99%	53,619.53	32,474.82	10,612.66	265,400.79	× 0.01 =	1,568,544.41	0.83 0.42	1,303,143.62 651,302.34	48,507.99
Other manufacturing	4,782.93	9,541.10	4.41%		9,541.10								
Manufacturing residual	22,224.99	26,133.59	1.02%		26,133.59								
Utilities	11,662.13	20,805.03	3.68%		20,805.03								
Construction	8,852.46	17,620.55	4.40%		17,620.55								
Wholesale	31,293.38	55,074.30	3.60%		55,074.30								
Retail	11,346.09	19,481.06	3.44%		19,481.06								
Sale of motor vehicle	9,817.10	17,823.02	3.80%		17,823.02								
Transport	28,778.45	54,635.08	4.09%		54,635.08								
Finance	28,373.94	53,205.82	4.01%		53,205.82								
Public	4,825.09	10,800.54	5.17%		10,800.54								
Education	14,185.59	24,721.01	3.53%		24,721.01								
Real estate	26,686.83	48,488.26	3.80%		48,488.26								
Healthcare	5,922.63	12,465.11	4.76%		12,465.11								
Social and private household	9,484.38	18,020.54	4.09%		18,020.54								
Tourism	17,716.09	32,577.28	3.88%	5.69%	42,924.83	25,208.74	10,347.54	258,770.67	× 0.00 =	481,024.38	0.46 0.39	222,253.71 186,102.47	10,135.12
Other discrepencies as a result of grouping	11,961.01	11,961.01	N/A										
Grand total	**367,5563.00**	**630,792.31**	**3.43%**		**670,177.00**								

1 From supply chain 2 From spending of employee

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