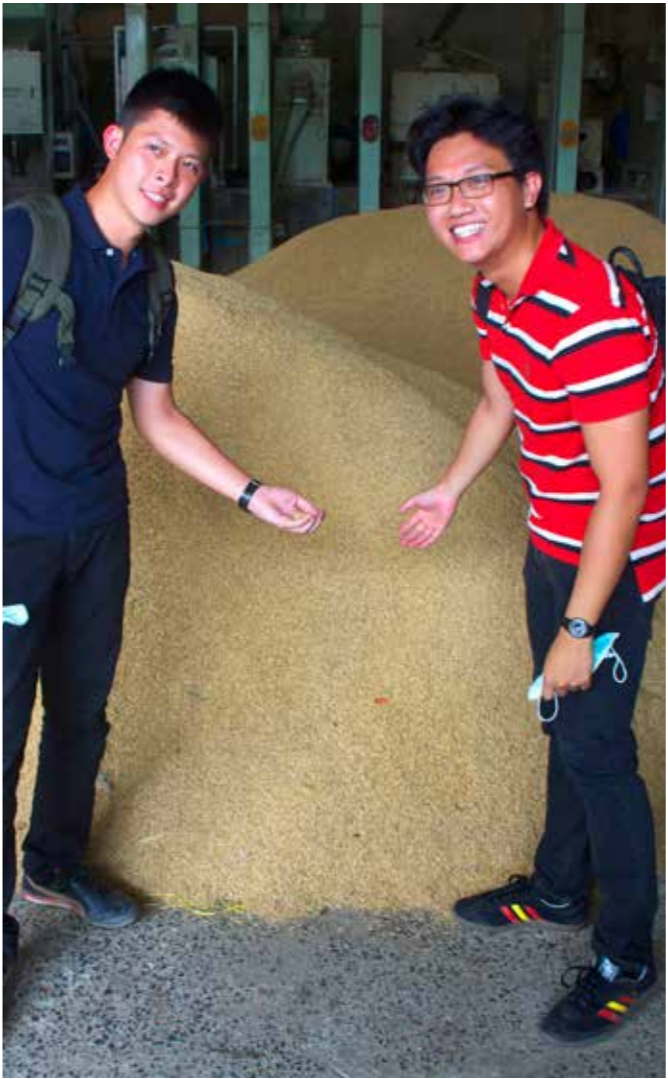




ISM MYANMAR

27 July - 05 August 2014



Foreword

Myanmar has undergone an incredible transformation in recent years. With the political reforms in 2011 and the subsequent removal of Western sanctions, it has seen burgeoning opportunities for economic growth and business. However, despite the rate of political and economic transformation, the country still faces many challenges.

Much has been written in the news about the significant amounts of foreign direct investment that has been going into the country and the wealth of opportunities that this last frontier market has to offer. But what are the realities on the ground? Can the coverage in the press be taken as the literal truth or are there more complex issues underlying Myanmar's economy? It was with these questions in mind that the students on the International Trading Concentration embarked on their learning journey to better understanding the realities faced by the trading sector on the ground. Through the visit, they gained a rare inside view into the operations of local businesses across the trading value chain. This included the financial and shipping sectors, producers and various institutions involved in the facilitation of trade.

We would like to acknowledge the gracious support of organisations such as Great Wall Industries, Amara Bank, Myanmar International Freight Forwarders Association, Société Générale de Surveillance (SGS) Myanmar, whose warm hospitality and willingness to share ensured a meaningful visit for our students. The support provided by our industry partners was also paramount in ensuring the success of our study visit. Their confidence and commitment to our mission will ensure that the next generation of trading talent will continue to be equipped to meet the constantly evolving challenges of the sector.



Assoc Prof Annie Koh
Academic Director, International Trading Institute@SMU
Singapore Management University

Vice President
Office of Business Development and External Relations

Foreword

One does not have to look too deeply to appreciate the potential that Myanmar holds in the stage of global trade.

It was not too long ago when Myanmar was the world's largest exporter of rice. Today, it arguably possesses one of the largest reserves of timber in Asia and has also been actively developing its energy infrastructure. A gas pipeline designed to transport natural gas from Myanmar's western coast to China went into operation just last year and a parallel pipeline transporting crude from Myanmar's port of Kyaukpyu to China is in the works.

These exciting changes that are taking place in Asia's last frontier market presented a unique opportunity for the students to develop first-hand knowledge on how the Myanmar government, businesses and people were not only managing, but thriving as the country seeks to transform its economy. Through the exchanging of ideas with local industry leaders, officials, and site visits to factory sites and plantations, greater clarity was developed on the potential that Myanmar has to offer the world.

Such a learning experience would have been impossible to replicate in a conventional classroom and was only made possible by the strong support from our stakeholders. To our gracious hosts, partners and friends who have all heavily invested in the next generation of trading talent, it is with sincerest thanks that we acknowledge your efforts and generosity.



Christopher Chow
Director
International Trading Institute@SMU
Singapore Management University

TRADING KNOWLEDGE, GOING GLOBAL

The International Trading Institute (ITI) is a tripartite collaboration between Singapore Management University (SMU), International Enterprise Singapore (IE Singapore) and leading industry partners.

The Institute boasts a specialist focus on international trading and is supported by a unique public-private partnership. ITI aims to establish itself as the premier industry platform for thought leadership in the arena of international trading. ITI activities include delivering training and education at the undergraduate and

postgraduate levels and conducting high quality applied research with an Asian flavour. Through SMU, ITI offers the International Trading Concentration (ITC) which prepares undergraduates for a career in the international trading sector. Visit our website at www.iti.smu.edu.sg



SINGAPORE MANAGEMENT UNIVERSITY

A premier university in Asia, the Singapore Management University (SMU) is internationally recognised for its world class research and distinguished teaching.

Established in 2000, SMU's mission is to generate leading edge research with global impact and produce broad-based, creative and entrepreneurial leaders for the knowledge-based economy. It is known as a pioneer for its interactive and technologically-enabled pedagogy of seminar-style teaching in small class sizes which remains its unique hallmark. Home to 7,000 students, SMU comprises six schools: the School of Accountancy, the Lee Kong Chian School of Business, the School of Economics, the School of Information Systems, the School of Law and the School of Social Sciences, offering a wide range of bachelor's, master's and PhD degree programmes in business and other disciplines.

With an emphasis on generating rigorous, high impact cross-disciplinary research that addresses

Asian issues of global relevance, SMU faculty collaborates with leading foreign researchers as well as partners in the business community and public sector through its research institutes and centres. Through executive education, the university provides public and customised training for working professionals in meeting the needs of the economy. Close relationships with leading universities, including The Wharton School, Carnegie Mellon, the University of Pennsylvania and the University of Chicago's Booth School of Business, allow SMU to draw on their academic and research strengths in various collaborations. The SMU city campus is a state-of-the-art facility located in the heart of downtown Singapore, fostering strategic linkages with the business and wider community.

To find out more, visit www.smu.edu.sg



LOCAL TALENT, GLOBAL IMPACT

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To complement the classroom learning, students will have exciting opportunities to go on Industry Study Missions (ISM) overseas and site visits, attend networking events, ITI Guest Lectures and other seminars, as well as participate in commodity trading simulations. Past Industry Study Missions (ISM) include visits to China, Abu Dhabi & Qatar, Vietnam, Australia, Indonesia and Malaysia. ITC students are also strongly encouraged to take up internships with organisations in commodity trading and related industries, such as commodity trading firms, banks and brokerages. This offers ITC students the opportunity to explore these industries as attractive career options, while organisations achieve a better fit between individuals and their talent needs.

ITC CURRICULUM

- (a) Financial Institution, Instruments & Markets (FNCE 102)
- (b) Corporate Reporting & Financial Analysis (ACCT 201)
- (c) Trade Finance (FNCE 310)
- (d) Enterprise Risk Management (FNCE 309)
- (e) Analysis of Derivatives Securities (FNCE 305)
- (f) Shipping Business (TRAD 201)
- (g) Law of International Trade (LGST 223)

Non-credit courses

- (a) Oil Trading
- (b) Agri-commodity Trading
- (c) Iron Ore and Met Coal Trading
- (d) Petrochemicals Trading
- (e) Coal Trading

ITC students are required to complete at least 3 non-credit courses to graduate with an ITC specialisation.



INTRODUCTION

ISM Myanmar marks the first time SMU students on the International Trading Concentration (ITC) have visited Asia's last frontier market. The Industry Study Missions are designed to give the ITC students practical exposure to markets and commodities which would not be possible through a seminar or classroom lecture. Our visit to Myanmar was designed with the objective of letting the students analyse and witness the economic changes taking place in Myanmar as the country opens up to the world. The trip was tailored to cover commodities such as rice, teak, sugarcane and ethanol, as well

as trade financing and logistic support through port visits and a better understanding of the country's freight forwarding section. The students were in for a rollercoaster experience filled with boat rides, propeller planes and the vast outdoors.

The team was hosted by Great Wall Industries for the first leg of the trip. Great Wall's activities stretch across sugar, wood, plantations and the service sector. As one of the industry leaders in the trading value chain, the ITC students had a lot to learn from the company on how business was conducted in Myanmar.



Tissue Culture Lab

Our first visit took us to the Great Wall tissue culture lab, the first and only one of its kind in Myanmar. Tissue culture is a process that involves exposing plant tissue to a specific regimen of nutrients, hormones, and lights under sterile conditions to produce many new plants. Each plant is a clone of the original mother plant and is produced over a very short period of time. This method of mass propagation allows the company to reduce the time taken for plants to germinate and at the same time provides higher yields, resistance to pests and more importantly the ability to consume fewer nutrients. Using these cultured plants makes economic sense as it allows for longer and repetitive harvesting periods for plants.

Political Changes

The students had a fruitful discussion with the management team of Great Wall regarding the political climate in Myanmar. The key take-away lies in the impact of international trade; SIM cards which were priced at US\$1500, are available at just a small fraction of that cost now. Annual interest rates have dropped from 100% to 13% and more importantly, farmers and estates have legal ownership of their land, in contrast to the complete proprietorship by the government in the past. The people have seen the impact of recent reforms, which have been accompanied by an increase in press freedoms. Parliamentary discourse and changes to laws are documented and published in leading newspapers. There is a common acceptance in the parliament that the change must continue for the country to develop.



Plantation visits

Our first site visit was a teak plantation. Covering 1500 acres, Great Wall was the first private sector company to be given permission to commercially run a teak plantation. What made this tree the ideal choice for the region, was the favourable climate and soil conditions prevalent in most parts of Myanmar. In addition, the tree itself is low maintenance as it produces natural oils to ward off pests.

Private companies in Myanmar are now taking the lead in engaging the government to improve the quality of the processes used in plantations as well as address previous mismanagement of natural teak which led to a decline in the output of this premium wood. This informal partnership between the public and private sectors occurs across several industries in Myanmar. Developing this relationship by improving and educating both sectors is crucial for the future of this economy. One initiative is the ban on export of wood logs which will take effect on 1st April 2014 in order to allow all the ongoing logging contracts to be cleared. The law will only apply to unprocessed wood and not to finished value-added products like the ones Honda wood factory (a subsidiary of Great Wall) produces. This law will have a huge impact on the world's teak industry as teak only grows naturally in four countries in the world and Myanmar accounts for 75% of the world's teak market.

A common practice in Myanmar is to ship virgin logs to neighbouring countries which then process the teak and sell it, earning higher margins than the Myanmar. Neighbouring countries are thereby able to evade the export sanctions placed on Myanmar by the European Union and the US. The new law will encourage foreign direct investment into Myanmar



as a lot more wood processing production facilities will be required to turn the virgin logs into finished value-added products. Foreign investment will not only bring in much needed capital but also their expertise. Furthermore, it will help create employment opportunities for locals and allow Myanmar's milling industry to gain traction.

The law also aims to tackle the issue of deforestation. Myanmar's forest coverage dwindled to 24% in 2008 from 51% in 2005, and 57% in 1962. If the export of Myanmar Timbre continues at its current rate, wood supplies could be depleted within a decade. According to Thein Lwi, Secretary to the Chairman of Great Wall International Co., Ltd, "the project is focussed on saving the remaining one-fifth of the country's total area and also to manufacture high quality wood products to export".

With the demand for teak increasing because of the lifted trade sanctions on Myanmar and the diminishing supply of teak in the world due to the ban on the export of teak in Myanmar, we can expect the price of teak to increase over the next few years.



Honda Wood Factory

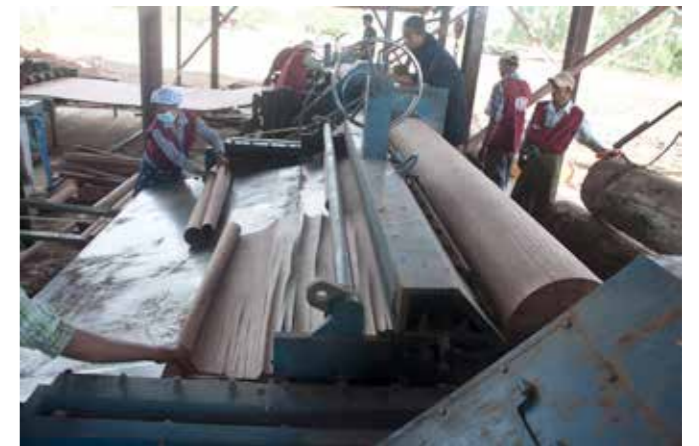
Moving down the value chain, we were given a chance to visit the Honda wood factory, where the virgin teak woods were further processed through veneering to make plywood and furniture. The students were taken on a guided tour of the factory processes through the cutting, storing and shipping of the different wood products.

The Honda Wood factory has two parallel processes both resulting in different finished products.

Process A	Process B
1) Field	1) Field
2) Veneer Factory	2) Saw Mill
3) Boiler	3) Recutting Mill
4) Crane	4) Dry Kiln
5) Plywood Factory	5) Store
6) Finished Product	6) Parquet Factory
7) Furniture Factory	7) Leave & Door Factory
	8) Finished Product

The main product derived from process A is plywood which is manufactured from less-valuable wood. On the other hand, process B yields products such as finger joints, block boards and parquet which are all made from more valuable wood such as Gurjan and Teak which form the main types of wood used by the company.

There are many benefits of having a privatised and non-government owned plantation such as being able to nurture and maintain the health of the trees as well as being able to grow the teak tree in an orderly formation. As a result, the trees in their plantation grow much faster and are of a higher quality than those from state owned plantations. Currently only about 10% of the finished products the factory produces is exported overseas while the remaining 90% is sold locally. Moving forward, Honda Wood factory intends to move towards increased automation to improve efficiency and speed.



Sugar Plantation

Another example of grass root dissemination of information and technology was seen at the Great Wall sugar plantations. Relying on the sugarcane for its own processes, the company extends financial and logistical support to nearby farmers growing the crop to improve their yields and sugar content. Sugarcane is a reliable crop as it always produces a yield and is suited for mass plantations covering thousands of acres. We were instructed on efficient crop management, as well as assessments conducted to check the health of the crop. The key learning point from this sojourn was the inherent dilemma between the farmer and the mill owner. Yields and sugar recovery values are inverse, and while farmers prefer higher yields, this directly reduces the sugar recovery and the crops demand from the sugar mills.



Sugar Factory

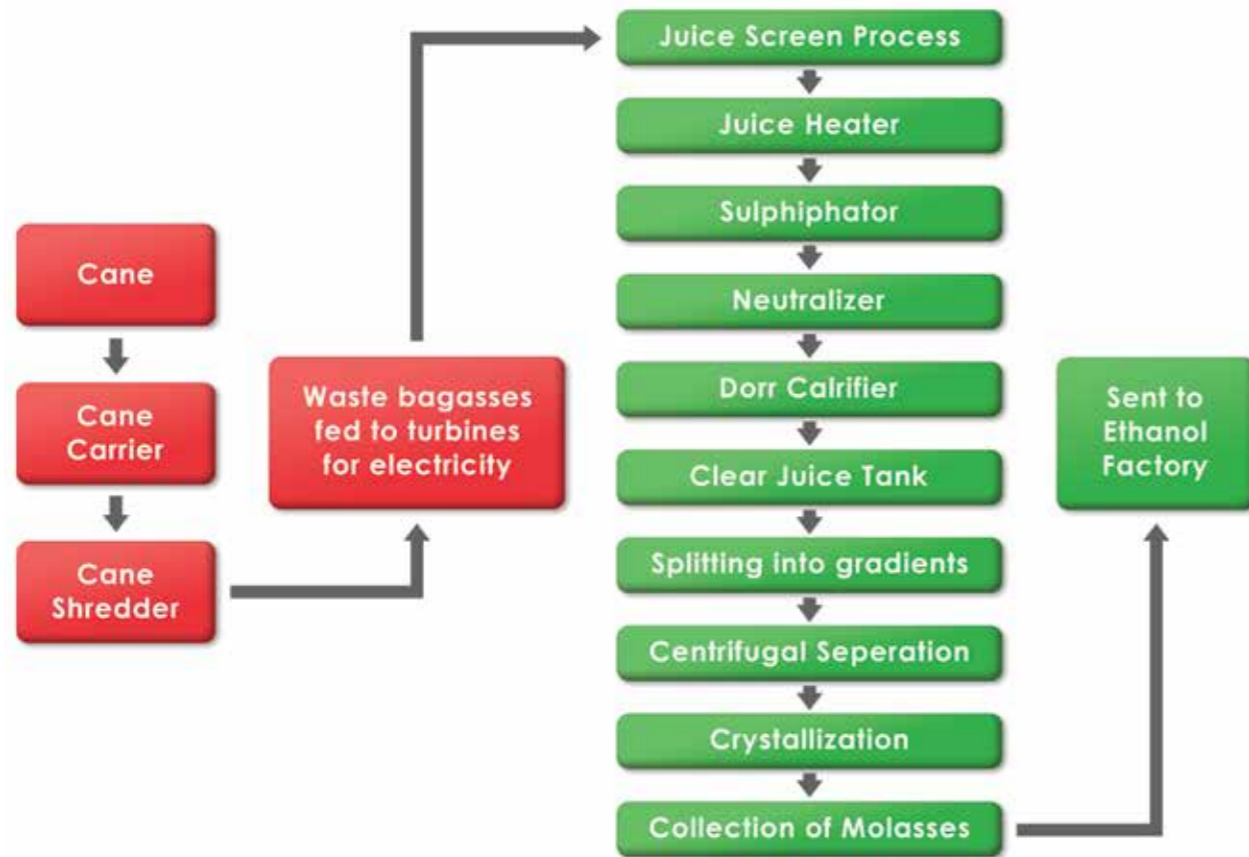
To further explore the process of sugar production, the students visited the Maung Kong Sugar factory. The three main products of sugarcane – molasses, bagasse and sugar, are all utilized in this factory. The bagasse or waste once the sugarcane is crushed and dried, is sent to an electricity generation plant which fulfils the needs of the factory. Waste bagasse can also be stowed, trimmed and sent to paper mills as well. The molasses are a final product along with the sugar, and is sent to the ethanol mill for further processing. At every step, the factory includes turnabout processes to maximize the production of sugar and molasses. Ethanol is a longer process including repetitive distillations and fermentation to produce a 99.8% purity product. This finds its way into petroleum blends and exports, as other countries struggle to meet regulations for blending.



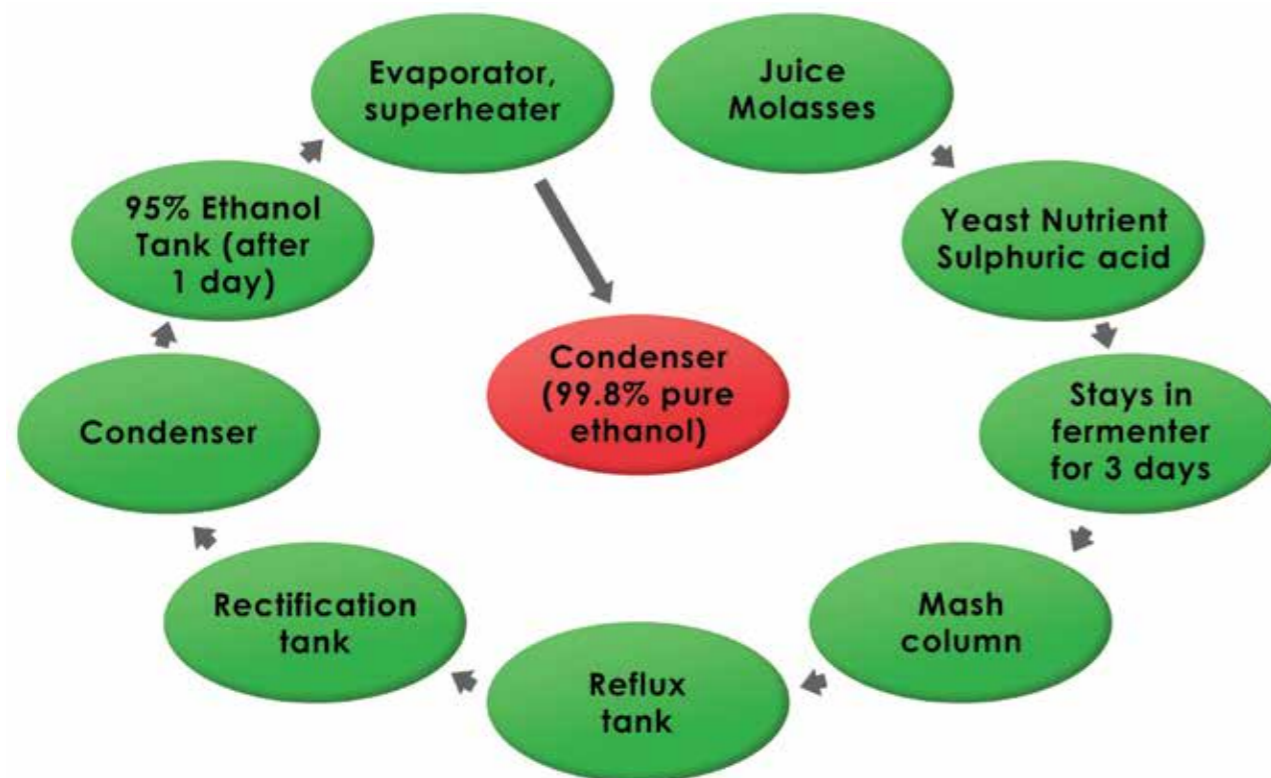
The process:

1. Cane is transported to the factory onto the weighbridge where the weight is recorded.
2. The cane is passed through a series of shredders, which reduce the billets of cane to a fibrous mass. The shredded cane then passes through a series of five crushing mills to extract as much sugar juice as possible. Shredded cane is repeatedly mixed with heated water and crushed between rollers. The collected juices contain 10-15% sucrose.
3. The fibre remaining after the cane has passed through the milling train is called "bagasse". Bagasse is used as fuel for the boiler plant, which provides steam to power the entire factory. Excess power that is produced from bagasse is exported to the state grid while excess bagasse is sold to manufacture paper products.
4. Extracted cane juice contains some soil and other undesirable impurities. To remove these, the juice is heated, following which lime and sulphur dioxide is added to the juice. Lime adjusts the pH of the juice to 7, thus preventing decay into glucose and fructose, and precipitate impurities. On the other hand, as raw sugar has a yellow to brown tinge, sulphur dioxide is bubbled through the cane juice to bleach raw sugar into white sugar. The impurities settle out in the clarifier and then go to the rotary vacuum filters, which filter out any remaining juice. The filter mud from the vacuum filters is rich in nutrients and is recycled back to cane fields.
5. The clarified juice is concentrated to a thick syrup by boiling off water in the evaporators. The juice passes continuously from vessel to vessel until it is concentrated to a syrup containing approximately 70% sugar.
6. At the pan stage the syrup from the evaporators is converted to crystal sugar. A charge of syrup is charged into a vacuum pan and again boiled under a vacuum. A quantity of very fine "seed" crystal is introduced. As the water evaporates fresh syrup is added and sugar is deposited on the seed crystal. This process continues until the crystals have reached the desired size.
7. Sugar crystals are separated from the syrup in the centrifuges. The centrifuges are perforated metal baskets spun at high speed by an electric motor. While the sugar is spinning in the baskets it is given a short burst of hot water to help wash the sticky molasses off the sugar crystals. Molasses is produced as a by-product of sugar production, apart from various industrial use it can also be used to produce ethanol.
8. Sugar has to be dried and cooled to precise levels to enhance its storage life. This is done in the sugar driers. Evaporation of excess water from the surface of the crystals results in the desired cooling of the sugar.





The process of producing ethanol is primarily involves distillation. It takes approximately 15 tonnes of sugarcane to make 1 ton of ethanol and the whole process from cane to ethanol takes 5 days.



Shwebo Rice Mills Visit

Myanmar was the world's largest exporter of rice till 1960. Now after 5 decades of dwindling growth, the rice industry is growing once again to reclaim the top spot. The major rice-producing regions are in the delta, south of Myanmar, due to their higher rainfall. These four regions namely, Ayeyarwady, Bago, Yangon, and Mon State make up more than half of the monsoon crop and are cultivated mainly with rain-fed paddy.

Our students visited the Five Diamond Rice Mills in the Shwebo region of Myanmar to witness this very revival. The Shwebo township is strategically located near the Ayeyarwaddy and Chindwin river and with the completion of Kabo Dam, which created over 3 million acres of irrigated land, the township became a large producer of irrigation-fed paddy, producing up to 600 000 tons annually. The dam allowed farmers to be less dependent on seasonal rainfall and grow more than one crop cycle per year. The "Shwebo Paw San Rice" is internationally renowned for its fragrance and superior quality, being awarded the World's Best Rice Award at the TRT World Rice Conference.

Some of the critical observations from visiting the mills in the area was the high demand in the

country for the monsoon crop. Mill owners don't need to export as all the produce is consumed by a growing local demand. The situation is very similar to neighbouring Indonesia where local demand has helped boost economic growth. Despite the presence of international varieties of rice which have higher yields, farmers in Shwebo are unwilling to grow these hybrid rice due to traditional taste preferences. The predominantly agrarian culture of the country in effect, dictates the demand and supply of the various varieties available.

Our final leg of the visit focused on the much neglected but extremely important aspect of trade, the logistics and handling of the commodities traded.



Myanmar International Thilawa Terminal

The Myanmar International Thilawa Terminal Visit was an eye-opener into the transport sector of the country. Still in its early stages of development, the Yangon Port area operates 90 percent of the nation's maritime trade. The main problem plaguing the country is the development of roads and links to the port areas. Ship to Rail and Rail to Truck node points are not well developed leading to slower load

times and long waits alongside. Export of its main commodities rice and teak, is also hampered by the lack of specialized ports for handling the cargo. However, the recent Japanese Special Economic Zone planned in the Thilawa region, is expected to bring in much needed expertise in technology and developmental planning.

Japanese Special Economic Zone

Myanmar now allows foreigners to establish fully-owned firms, offer tax exemptions and long-term land leases to investors with the passing of the new Foreign Investment Law in 2012. The new legislation is a bid to attract foreign capital and fuel economic development. The country's liberalization of its state-controlled economy has certainly brought vast opportunities for foreign investors.

Official Development Assistance (ODA). This is in conjunction with Japan's keen interest in the economic and political reforms in Myanmar and earlier agreement to offer financial assistance for developing infrastructures at the commercial hub of Myanmar, Thilawa SEZ in Yangon.

According to Myanmar Port Authority (MPA), a port construction project in Thilawa Special Economic Zone (SEZ) will begin in 2014 using US\$205 million low-interest, long term loan from Japan's

The Thilawa SEZ project is to be jointly developed by Myanmar and Japan and will affect Myanmar International Thilawa Terminal positively as it directs more business through its terminal.



Myanmar International Freight Forwarders Association

At the Myanmar International Freight Forwarders Association (MIFFA), the students were briefed by Capt. Aung Khin Myint on the shipping sector in the country. Even today, 100 year old laws related to shipping documents have still not been updated, along with legal definitions for freight forwarders and industry terms, making it hard to foreign companies to work around the legalities. Customs clearance processes take between 7-14 days as compared to minutes in Singapore. Capt. Aung emphasized on

the need to go paperless, and avoid the extensive delays due to red tape. To spearhead this change, MIFFA is working closely with the government as a consulting body to introduce changes to the freight forwarding system by recommending the shift to palletisation for cargo containers to bring them in line with international standards. The general trend is that of gradual change in this industry, with foreign investment and training needed to bring about more permanent changes.



SGS Myanmar

Société Générale de Surveillance (SGS) Myanmar, is the leading inspection services company in the country and the world. The company essentially functions as a third party whose main purpose is to facilitate trade. It is neither involved in manufacturing nor trading, to ensure that there is no conflict of interest with their clients and seek to create confidence between parties such that the trade is conducted according to their contract.

They provide evidence that the goods are shipped according to the specific conditions of the contract or the Letter of Credit and are able to provide data and facts of shipment transactions for related parties in case of disputes in the form of the certificate issued by the company. The Certificates and Reports of Third Party can be used in insurance claims, arbitration & court claims as well as bank negotiation, which speak volumes about the confidence the clients have in the company. In the course of their business usually only 3% - 5% of goods need inspection depending on the contract term. However, an interesting insight was that in Myanmar the company goes the extra mile in ensuring their inspections are thorough to maintain their global image as a reliable inspection service.

Students were given a peek into the company processes which include trade cargo inspection,

soil inspection a, fumigation and pest control services and lab services for testing and preparing of minerals.

The company believes as the cost of production rises in China, companies will increasingly shift their operations to Myanmar. This will be all the more evident given the strategic location of Myanmar located in between two of the BRIC countries, India and China, which allows it access to two of the fastest growing economies in the world. As Myanmar increases the pace of its expansion, trade will grow as well, and SGS stands poised to play an important part in increasing confidence and reliability in trading with this region of the world.



United Amara Bank

Our only insight into the financial sector and probably the most valuable of all, came through a visit to United Amara Bank, the leading private bank in Myanmar for trade financing. Mr. Mahesh Bhandari, Director of International Banking educated us about the opportunities and drawbacks of the countries finance sector. With a non-existent market for securities, companies rely on bank loans for financing operations. But the Central Bank, has passed laws mandating the duration of loans for a period of only one year, with banks requiring a deposit of 250% as collateral for loans issued. This has crippled long term project financing, and has created a huge grey market for loans and financing. In addition, banks face the problem of getting retail customers to deposit

their money in the banks, as locals prefer to hoard cash at home, wary after the 2003 run on the banks. Thus, the banking sector requires additional support from both the government and the people to expand further.

The Industry Study Mission to Myanmar was a tremendous learning opportunity and was possible only with the support of the International Trading Institute at SMU. Myanmar is a nation full of opportunities, with the government itself, taking proactive steps to promote trade and investment. Investment in roads, railways, infrastructure and machinery is vital to future success, and from what we've seen, they will be the major sectors of future growth.



Acknowledgement

The International Trading Institute@SMU and the student participants from the International Trading Concentration (ITC) would like to thank:

ITI@SMU's Industry Partners

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