

Global Entrepreneurship -GE2- July 2019

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Global Entrepreneurship

- Global Entrepreneurship has flourished over the last 50 years. Major changes in world governments, economic systems, and cultural interactions have created an environment in which entrepreneurship has become a significant factor in regional economic development, global geo-politics, and even cultural change.
- There have been three significant issues that have enabled much of this innovation.
 - The incredible advances in technology –particularly in computing and the internet, but also in the life and medical sciences.
 - The dismantling of barriers to trade and the movement of goods and ideas across borders that has found expression in world trade organizations like the WTO and in multi-national trade agreements like the European Union (EU), North American Free Trade Agreement (NAFTA) and many others.
 - The opening of borders to a much freer movement of people who emigrate and immigrate to find better opportunities in education and employment.

Technological Advances

- It is hard to over state the importance of the rise of computing, communication, and internet technologies to the creation of the world we live in today.
- Tom Friedman in his book "The World is Flat" gives one of the best expositions of how technology and globalization have changed the world. In chapter 7, "[Types of Opportunities for Global Entrepreneurship](#)," we will take another look at his work and some of the criticisms it has received.
- The internet has been an enabler of the global supply chain as we shall see later in this chapter.
- As social media has spread around the world, it has enabled like minded individuals to communicate without regard to borders and has enabled the good, the bad, and the ugly. It facilitates global business, global political movements, internet dating, and even terrorism.
- Medicine has become a global issue with both disease propagation and enabling collaborative efforts to use advances in the life sciences to fight disease.

Eliminating Restrictions on Trade and Investment

- For most of the past half century, the trend has been to remove barriers to trade and the movement of goods and ideas across borders.
- Toward that end the world has created global organizations like the World Trade Organizations (WTO) which creates a framework for rules for trade amongst nations that adhere to the WTO.
- The General Agreement on Tariffs and Trade (GATT) set out rules for tariffs and trade and eventually merged into the WTO.
- The World Bank was created to provide capital to developing countries to enable them to join the groups of trading nations.
- [Chapter 9 on Global Finance](#) will consider some of the methods that can be used to finance global ventures.
- Multi-national trade agreements like the European Union (EU), North American Free Trade Agreement (NAFTA) and many others created trade openings among the signatories.
- The Southern Common Market (Mercosur) was formed in 1991 to enable trade among South American nations.
- By 2016 this movement toward free trade was beginning to encounter some resistance from populist movements in many countries. In the US, it became an issue in the Presidential campaigns. It was a factor in leading the United Kingdom (UK) to vote to leave the European Union (EU). Populist movements in many of the EU countries are threatening to derail many of the changes we have seen over the past half century.
- In [Chapter 6 on Free Trade](#) we will consider the economic theories underlying free trade and also some of the critiques that threaten to former global consensus.

Freer Movement of People Across Borders

- The ability of people to move across borders to find opportunities in education, employment, and entrepreneurship has enabled entrepreneurship in ways that did not exist in the past.
- Later in this chapter, we will look at the role that emigration and immigration has had on the development of entrepreneurship and how it has affected both the home country and the host country.
- In [Chapter 2](#) we will consider the effects of global changes like:
 - The opening of China to the west after President Nixon’s visit in 1972.
 - Educational exchanges like the Chinese US Physics Education Agreement (CUSPEA) brought thousands of Chinese students to US universities. Trade and foreign direct investment began soon thereafter.
 - The end of the cold war and the dissolution of the former Soviet Union.
 - This allowed freer movement of people and ideas across borders and re-created nations in eastern Europe that embraced capitalism and entrepreneurship as a potential path toward catching up with the economic development of the west.
 - The formation of the European Union with a common market and borders that were opened under the [Schengen Agreement](#).
 - A movement toward democratic capitalism and away from socialist oligarchies.

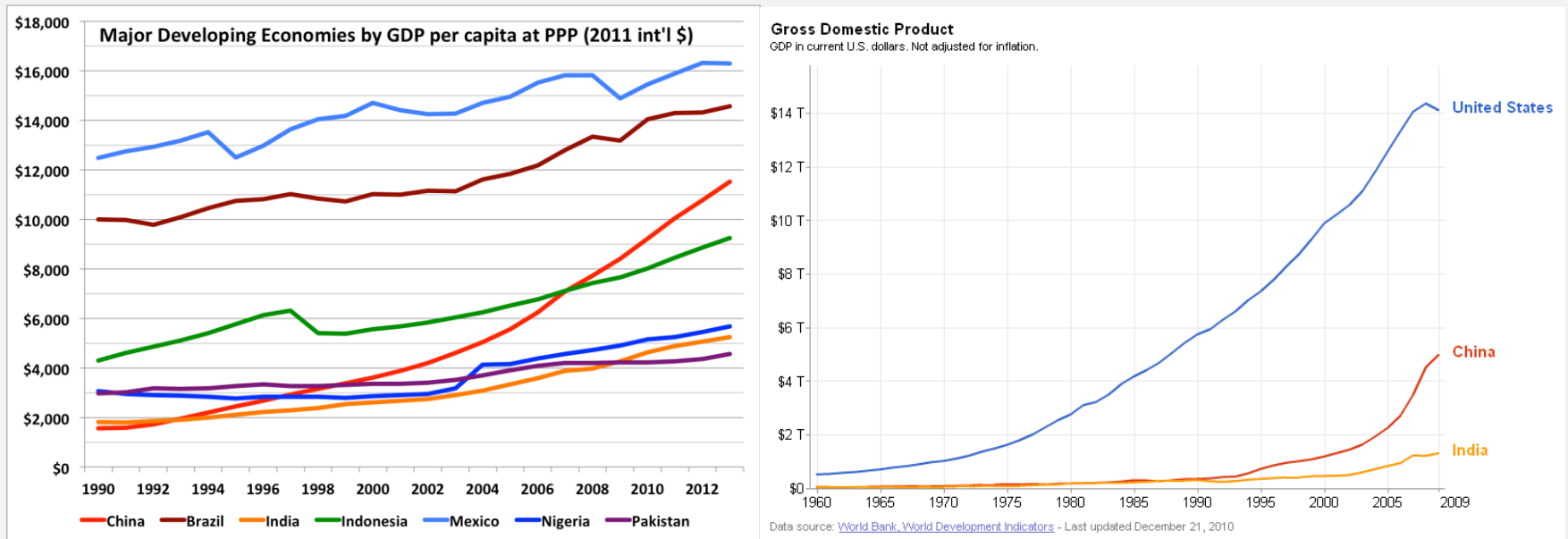
What is Entrepreneurship?

Now that we have identified some of the forces that are operating on the world's economy and political systems, we should take a moment to define what we mean by entrepreneurship when we use the term. We shall look at the definition given by three key thinkers on the subject.

- Joseph Schumpeter: Entrepreneurship is seen as new combinations, which include the introduction of new goods, new methods of production, opening of new markets, new sources of supply, or a new organization.
 - Joseph Schumpeter -Austrian Economist who became a Harvard Professor
 - http://en.wikipedia.org/wiki/Joseph_Schumpeter
- Peter Drucker: Entrepreneurship is an act of innovation that involves endowing existing resources with new wealth producing capacity. –
 - Peter Drucker, Professor and Management Consultant
 - Called "Founder of modern management" by Forbes Magazine
 - <http://www.forbes.com/sites/stevedenning/2014/07/29/the-best-of-peter-drucker/>
 - Aside: start thinking about how you and others might define "wealth."
- Jeff Timmons: Entrepreneurship is a way of thinking, reasoning and acting that is opportunity obsessed, holistic in approach and leadership based. –
 - Jeff Timmons late Professor at Harvard and Babson
 - Author: "New Venture Creation," "The Entrepreneurial Mind," and others.
 - http://www.inc.com/mike-hofman/2008/04/remembering_an_entrepreneurial.html
 - <http://uir.unisa.ac.za/bitstream/handle/10500/2050/01dissertation.pdf?sequence=2>
- These three definitions help fill out an evolving perspective on who entrepreneurs are how they operate. Schumpeter and Drucker focus on the process while Timmons focuses on the characteristics of the entrepreneur herself or himself.

Growth in Economies varies by country

Entrepreneurial activities take place within an ecosystem of the countries involved. As we can see below, that ecosystem varies by country and is always changing.



In 1974, China's GDP was about 280 B CNY

In 2014, China's GDP was 63,646 B CNY or \$ 10,361 B US.

This is a growth of 22,700 %

- "Graph of Major Developing Economies by Real GDP per capita at PPP 1990-2013" by CircleAdrian - Created on Excel from World Bank World Development Indicators 2014 data. Licensed under CC BY-SA 3.0 via Wikimedia Commons - http://commons.wikimedia.org/wiki/File:Graph_of_Major_Developing_Economies_by_Real_GDP_per_capita_at_PPP_1990-2013.png#/media/File:Graph_of_Major_Developing_Economies_by_Real_GDP_per_capita_at_PPP_1990-2013.png
- <http://www.theamericanconservative.com/articles/how-social-darwinism-made-modern-china-248/>

The Rise and Fall of the BRICS

- BRICS: Brazil, Russia, India, China, and South Africa
- The term was introduced by Goldman Sachs in 2001 as “BRIC”
 - South Africa was added in 2010 after petitioning to join what had become a formal group.
- In 2006 the heads of state met formally while attending a meeting at the United Nations.
- Their first formal meeting occurred on June 16, 2009 in Yekaterinburg Russia at the invitation of Dimitri Medvedev.
- These emerging economies were seen by many as the engines of global growth. With that recognition came increased influence.
- The group has called for the replacement of the dollar as the main reserve currency and has entered a variety of political frays.
- By 2015, we were seeing Russia suffering from world economic sanctions, Brazil mired in a corruption and constitutional crisis, China experiencing slow growth, and South Africa struggling politically and economically.
- The story continues to unfold.
 - <http://www.bloomberg.com/news/articles/2016-03-18/zuma-and-rousseff-united-in-misery-as-corruption-threaten-gains>

Why study international entrepreneurship?

- World markets are **larger and faster growing** than domestic ones.
- **Changes in technology, transportation, and trade** liberalization have made international trade more accessible to companies, especially new entrepreneurial firms.
- In a global economy, **consumers worldwide** choose from a wide variety of goods and services.
- Collectively, the movement of goods, labor and capital across national borders is part of a growing trend toward globalization—the creation of an **integrated interdependent** world economy.
- Entrepreneurs are on the cutting edge in creating international businesses; they are often the first movers into new markets, new products, and new services.
- Firms that choose to remain domestic miss great opportunities and often face increased risks.
 - For example, a company that has achieved the enviable position of having one-third of the US consumer market for its products has only a 1.5% share of the global market, 98.5% of the market is still available.
 - <http://data.worldbank.org/indicator/IC.BUS.NREG/countries>

Explosion of growth in the field

- Over the last 10 years, new business incorporations have averaged 600,000 businesses per year in the U.S. alone. At any point in time, about 16% of US firms will have been in existence less than one year.
- Since 1980, Fortune 500 companies have lost more than 5 million jobs, at the same time that 34 million new jobs were created by small entrepreneurial firms.
- The fastest growing of these start-ups are referred to as *gazelles*. Gazelles represent only 15% of new firms but accounted for an astounding 94% of job creation in the U.S.
- Entrepreneurs are the primary source of innovation; 67% of all new inventions are created by smaller firms. These innovations play an integral role in the renewal process, creating jobs as mature industries decline, while birthing entire new industries.
- Just as the practice of entrepreneurship has grown, so has entrepreneurship as a field of study.
 - As of 2005, there are more than 2200 entrepreneurship courses offered at over 1600 schools. In addition, organizations like the Entrepreneurship Division of the Academy of Management, Small Business Institute (SBI), International Council of Small Business (ICSB) and its American counterpart, and USASBE, the Association of Business and Entrepreneurship help develop a strong and rapidly emerging knowledge base for the field.

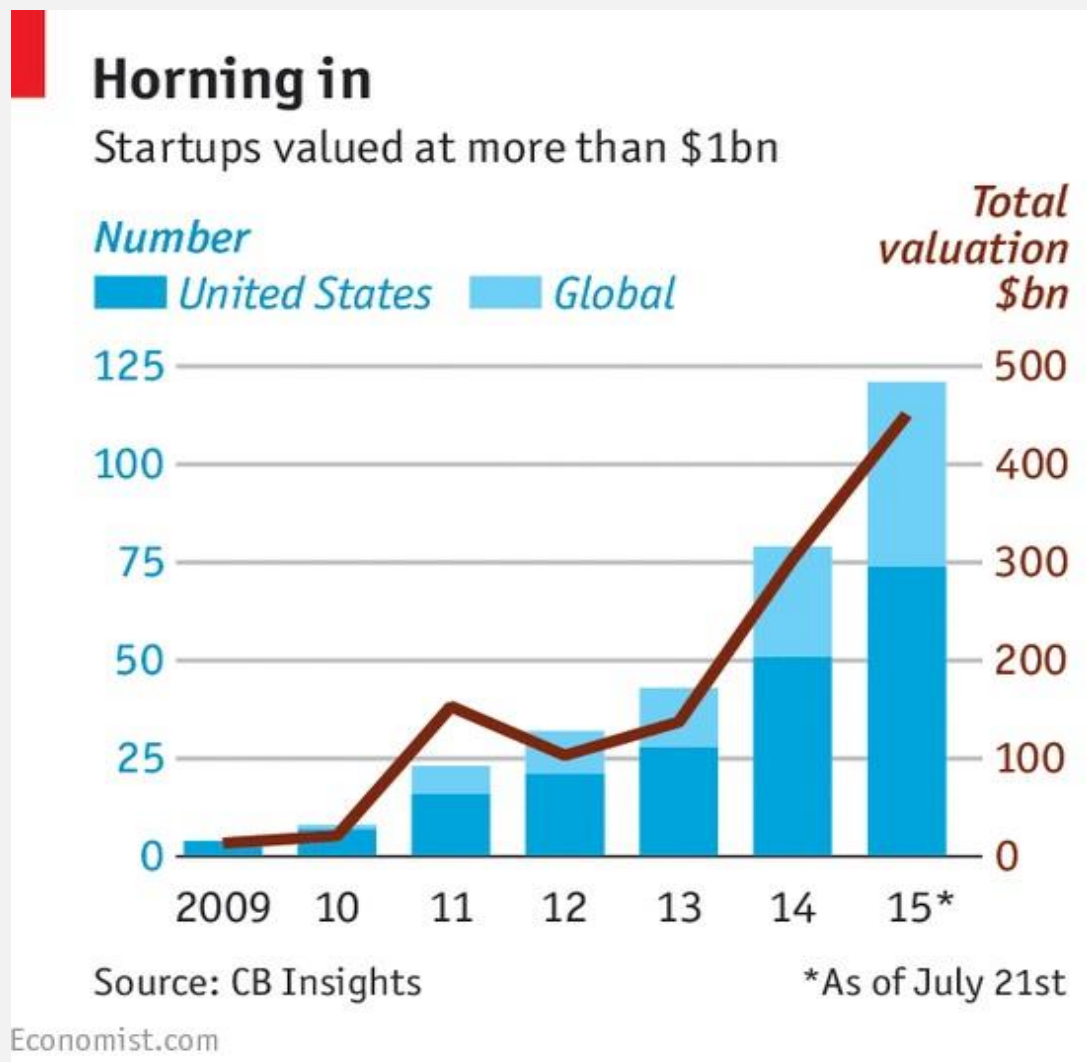
Trade Liberalization

- As we have seen, there is a high level of interconnection and integration among national economies. This new interconnected economy, facilitated by air travel, communications, computers and the internet, is one in which informed citizens and successful executives monitor events not only in their own community or nation but also worldwide.
- Trade liberalization of national economies has been driving the increase in world trade. Liberalization has been characterized by the decreased role of government in the economy. In [Chapter 6](#) we will consider these effects in more detail.
- The liberalization process usually includes a variety of steps including
 - the privatization of government owned enterprises,
 - the deregulation of industries
 - the removal of trade barriers.
- While all three of these policies have had an effect on economic growth, they also have had a substantial positive effect on trade.
- *Trade liberalization* refers to policies that directly enhance trade, such as the removal of tariffs of other trade barriers. Simply stated, when other economic factors such as education or level of natural resources are equal, countries with liberal trade regimes experience higher levels of trade.
- The most common form of trade liberalization is the reduction of trade barriers like tariffs. Tariffs are a tax the host government places on imports to make them more expensive than locally produced goods. This of course favors local businesses at the expense of international entrepreneurs.
- Trade liberalization increases competition, improving the quality and value of goods and services in local markets.
- As we will see, there is also a counter trend toward protectionism and greater government control of trade that threatens some of the progress made in past years.

Liberalization of world markets creates new opportunities

- Governments often try to help their local businesses by negotiating favorable bilateral trade agreements with other countries.
- Trading countries have chosen to enter multilateral agreements--trade agreements between large groups of countries. The largest such multilateral agreement is administered by the *World Trade Organization* (WTO). The WTO, established by the nations involved in a predecessor arrangement, the *General Agreement on Tariffs and Trade* (GATT), was created to monitor and control the international trading system.
 - WTO members include the developed countries as well as 110 of the 152 developing countries.
- Membership in the WTO requires adherence to a generally liberal set of trade arrangements that facilitate the expansion of orderly world trade.
- Concurrent with trade liberalization has been an outbreak of democracy. Countries with high levels of control over the political lives of their citizens are often the same countries with high government control over the economy. It is not surprising then that as countries become more democratic, they also develop more liberal trade policies.
 - This trend has been threatened by some governments reasserting control over the internet and what their citizens can view and who they can communicate with.

Increasingly we are seeing major new start up companies being done globally.



Global Supply Chains often allow smaller firms to find a spot.

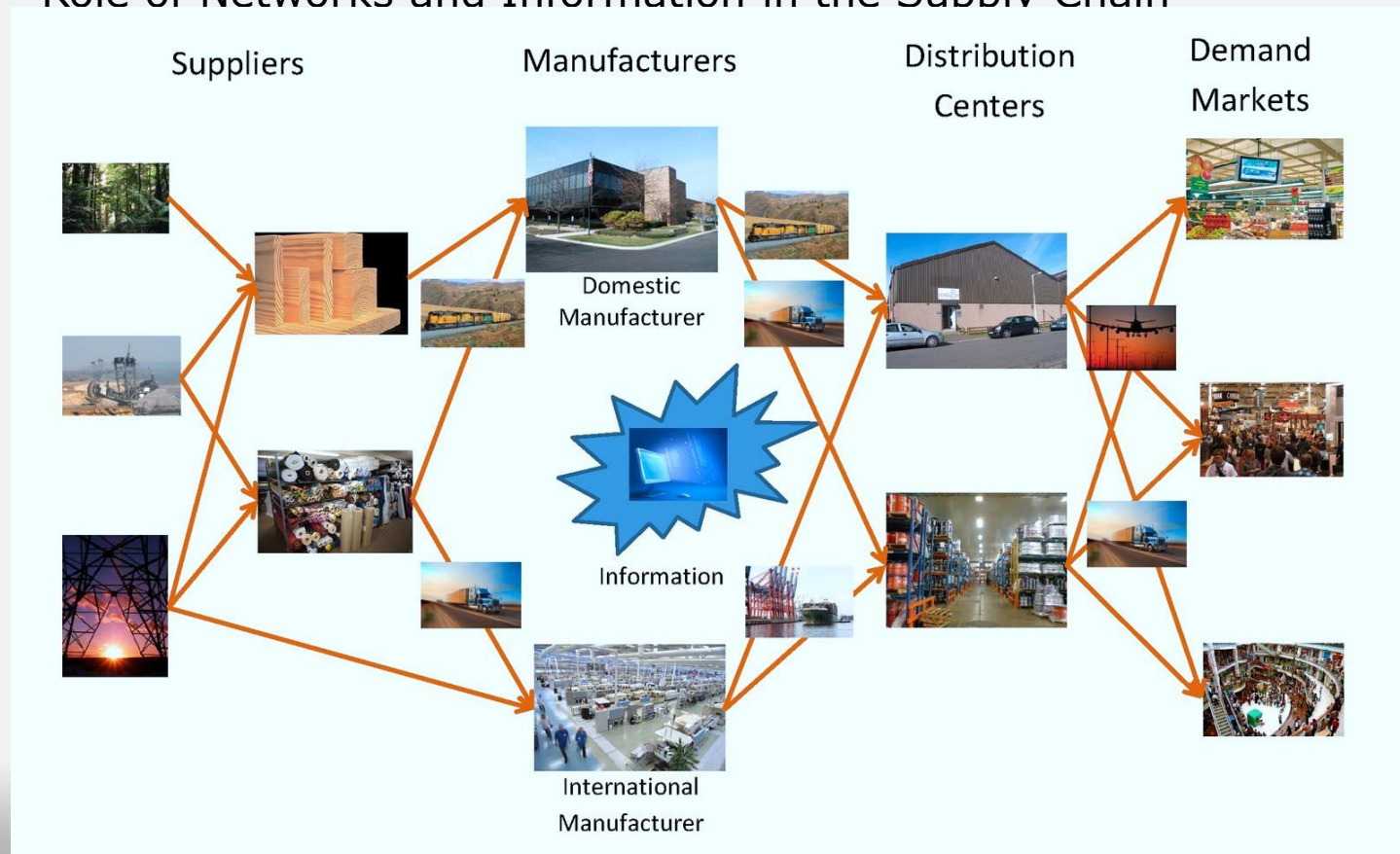
- Companies produce goods and services in a value-chain, a sequence of value added steps.
- Example: An auto manufacturer. They would purchase raw materials, manufacture sub-assemblies, assemble complete cars, transport them to markets, sell, and service them. Traditionally, these steps were conducted in a single location, but no longer is that the case.
- As trade barriers were reduced, communication and transportation expenses began to fall. This made it easier to have an interconnected (or “Flat”) world.
- In an interconnected world with free trade, firms could begin to move parts of their value chain to different locations -locations where entrepreneurs could offer more innovative or cost effective solutions than local suppliers.

The rise of small-firm supply chain networks

- *Global sourcing* is the process of partnering with world's best suppliers to provide customers with the best quality product or service at the best possible cost.
 - Global sourcing is a critical tool for firms in developed countries as it allows them to lower the average labor cost by mixing high paying knowledge jobs in the developed economy with lower paying lower-skilled jobs in the lesser developed country.
- Global supply chain management is more comprehensive than global sourcing.
 - In global supply chain management, firms integrate their entire supply chain globally -- from raw materials to finished delivered goods -- to provide high levels of customer satisfaction and higher profits. Firms increasingly rely on supplier networks around the globe to improve their quality and efficiency.

Supply Chain Management

- Anna Nagurney, UMass Amherst Professor, has provided an excellent analysis of the role that networks and information flow can play in creating a global supply chain.
 - <http://annanagurney.blogspot.com/2012/01/how-us-can-compete-and-win-in-global.html>
- Role of Networks and Information in the Supply Chain



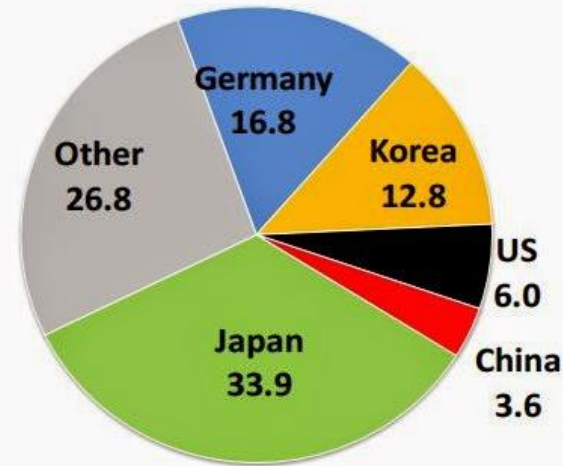
Apple Global Supply Chain -iPhone

Table 1 . Apple iPhone 3G's Major Components and Cost Drivers

Manufacturer	Component	Cost (USD)
Toshiba (Japan)	Flash Memory	\$24.00
	Display Module	\$19.25
	Touch Screen	\$16.00
Samsung (Korea)	Application Processor	\$14.46
	SDRAM-Mobile DDR	\$8.50
Infineon (Germany)	Baseband	\$13.00
	Camera Module	\$9.55
	RF Transceiver	\$2.80
	GPS Receiver	\$2.25
	Power IC RF Function	\$1.25
Broadcom (USA)	Bluetooth/FM/WLAN	\$5.95
Numonyx (USA)	Memory MCP	\$3.65
Murata (Japan)	FEM	\$1.35
Dialog Semiconductor (Germany_)	Power IC Application Processor Function	\$1.30
Cirrus Logic (USA)	Audio Codec	\$1.15
Rest of Bill of Materials		\$48.00
Total Bill of Materials		\$172.46
Manufacturing costs		\$6.50
Grand Total		\$178.96

http://tomjconley.blogspot.com/2014_10_01_archive.html

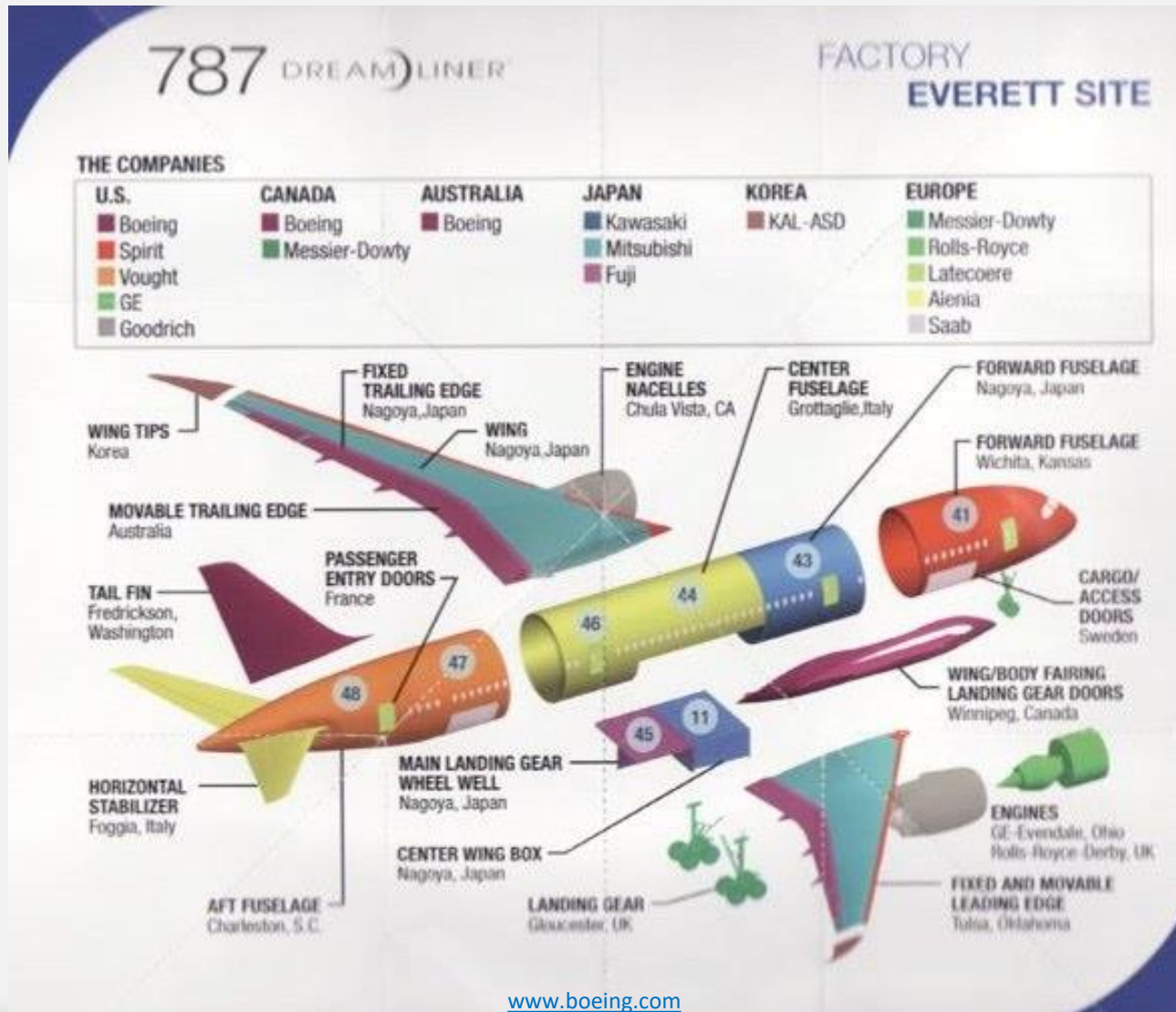
iPhone Manufacturing Cost Distribution by County (%)



Source: Xing and Detert (2010)



The Boeing 787 is another great supply chain example



Global supply chain management

- For small entrepreneurs to succeed in a global supply chain environment, they need to be interconnected with their dominant buyers and suppliers across the globe. They also need to cost effectively transport their goods and services to distant markets.
- A few decades ago commercial airfreight was not an option, but today, air cargo is the most reliable and cost effective means of shipping. Many modern production management practices, including the just-in-time inventory techniques so important to multinational corporations, rely heavily on global air cargo.
- Ocean shipping costs have fallen by as much as 80% over the last fifty years. Sea freight has become seamlessly integrated with domestic rail and truck transportation; firms can now ship goods as easily across the globe as they once did across town.
- Because of deregulation and new technologies, telecommunication costs have dropped significantly in the post WWII era. New communications technologies have made it cost efficient to separate value-adding steps of production and use --the value chain--in ways that were not previously feasible.

Global supply chain management

- The global economy has also become interconnected along the Internet. Recent data shows over 800 million people use the Internet worldwide, and that number will top 1 billion users in 2006.
- The Internet has become a dynamic force in both business-to-consumer (B2C) and business-to-business (B2B) markets.
- B2B e-commerce now generates in excess of \$1.5 billion in revenues.
 - E-commerce is not just for large business; Evertek Computer Corporation, which sells new and refurbished computers and parts, has business in more than 80 countries, booked through internet portals.
 - MacNeill Engineering Company, headquartered in Marlboro MA discovered that the golf shoe companies to which they had sold spikes and other components had moved their manufacturing to China. Rather than close their doors, they created a global company with some of the manufacturing being done closer to the customers and also created a retail line of goods for the US and international markets. [[Case Study](#)]

The cross border movement of intellectual property

- Intellectual property—patents, trademarks, copyrights, and other proprietary process—represent the top of the economic food chain.
- Intellectual property can move across borders without transportation costs, giving it high profit potential.
- By every measure, the transfer of intellectual property across borders is increasing at record rates.
- Many countries, and China is an example, require that companies entering their markets do so with joint ventures that require some formal technology transfer.
- Informal, or even illegal, technology transfer is an increasing challenge to firms who are globalizing.
- Theft of intellectual property through cyber methods, both criminally and state sponsored, is an increasing challenge for companies and for the world's law enforcement agencies – including the FBI in the US.
- Balancing these risks against reward is one of the great challenges of global entrepreneurship.

Entrepreneurship is an Emigrant thing too.

- Migrant Brainpower

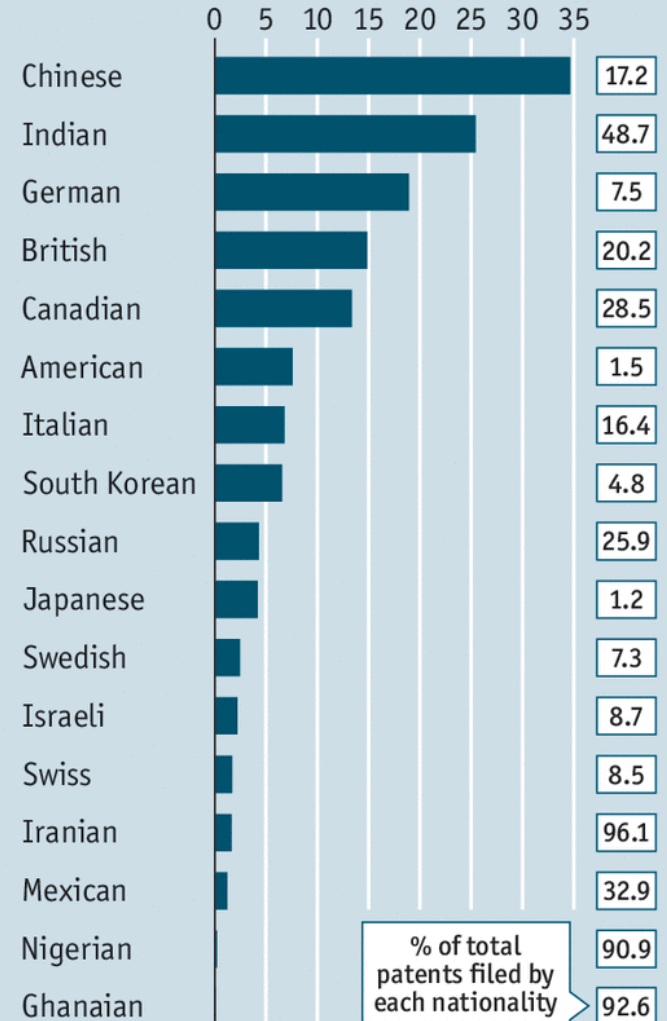
<http://www.economist.com/news/international/21656175-migrant-brainpower>

<http://www.economist.com/news/international/21656176-governments-believe-their-diasporas-can-solve-all-sorts-problems-they-are-picky>

- It is interesting that Indian inventors often leave home to file a patent (48.7%) while the German inventor usually does so at home -only 7.5% are done abroad.
- Technically this only shows patents and not entrepreneurship, but it indicates how influential immigration is upon innovation.
- This **diaspora** of innovation often becomes a source for new ventures as well as a built in support structure.

Patents filed by emigrants

2007-12*, '000



Source: WIPO

*To September

How Diaspora Networks Help Start-Ups Go Global

- “Many entrepreneurs have taken advantage of ethnic networks to formulate and execute a global strategy. The culture, values, and social norms members hold in common forge understanding and trust, making it easier to establish and enforce contracts.”
- “Through diaspora networks, global entrepreneurs can quickly gain access to information, funding, talent, technology—and, of course, contacts. In the late 1990s, for instance, “
- “Boston-based **Desh Deshpande**, who had set up several high-tech ventures in the United States, was keen to start something in his native India. In April 2000, he met an optical communications expert, Kumar Sivarajan, who had worked at IBM’s Watson Research Center before returning to India to take up a teaching position at the Indian Institute of Science in Bangalore. Deshpande introduced Sivarajan to two other Indians, Sanjay Nayak and Arnob Roy, who had both worked in the Indian subsidiaries of American high-tech companies. The trust among the four enabled the creation of the start-up Tejas Networks in two months’ time. Deshpande and Sycamore Networks, the major investors, wired the initial capital of \$5 million, attaching few of the usual conditions to the investment. Tejas Networks has become a leading telecommunications equipment manufacturer, generating revenues of around \$100 million over the past year.”
 - From: Harvard Business Review; Daniel Isenberg; Dec.2008

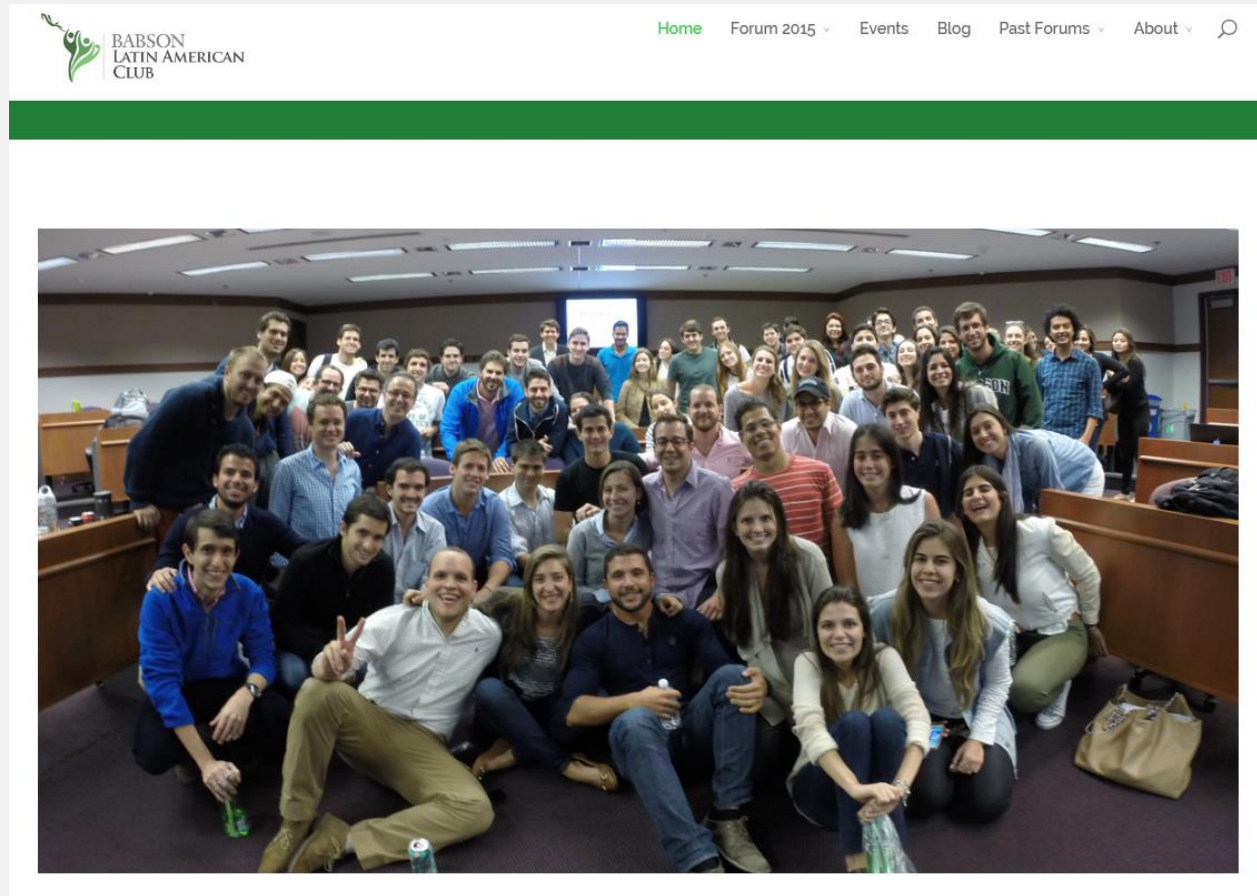
TiE – Boston -The Indus Entrepreneurs (<http://boston.tie.org/>)

- **TiECON East** - TiECON East is the largest startup conference on the East Coast that brings together established and startup entrepreneurs in Technology, Life Sciences, Education, and Cleantech. Entrepreneurs attend the two-day conference to learn about the latest trends in innovation, get advice from experienced entrepreneurs, and network to find their next big opportunity.
 - www.tieconeast.org
- TiE-Boston's **Monthly Dinner** features entrepreneurs who have demonstrated extraordinary success and created exceptional value for society and attracts over 150 guests to a networking reception and dinner. Past speakers include:
 - Nitin Nohria, Dean of Harvard Business School
 - Murali Aravamudan, Founder & CEO of Veveo, Inc.
 - Rama Ramakrishnan, Founder and CEO of CQuotient Inc.
 - Purnanand Sarma, President & CEO of TARIS Biomedical
 - Amar Sawhney, Chairman, President, and CEO of Ocular Therapeutix, Inc.
 - Dr. Una Ryan, President & CEO of AVANT Immunotherapeutics
 - Padmasree Warrior, Global CTO of Motorola
 - Promod Haque, a Managing Partner at Norwest Venture Partners
 - Krish Prabhu, President & CEO of Tellabs
 - Dr. Stuart Schreiber, a leading Biotech Entrepreneur



Latin America also has support groups –often college based

- <http://www.babsonlatinamerica.com/forum2015/>



From International Business (IB) to Global Entrepreneurship (GlobalE)

- How does global entrepreneurship differ from international business? In many ways it is a question of degree rather than difference.
- For example GlobalE often deals with smaller firms and new ventures. Some of the entrepreneurial firms are “born global” while others are firms that began regionally and then expanded to other countries. International business is generally focused on the role of larger and better established firms. Many of these are multi-national companies. The recent vote by the UK to leave the EU, Brexit, represented a major challenge to multinational companies like Ford, GM, Caterpillar, and others that had made major investments in the UK with an intention to sell throughout the EU. That strategy is now in question. Smaller new ventures tend to be more agile, but can also be more vulnerable.

Global Entrepreneurship (GlobalE) vs International Business (IB)

- GlobalE differs from IB in financing strategies as well. The GE may focus more on exchange rates, purchasing power parity, and competitiveness while IB focuses on the capital markets, international balance of payments, and the role of international financial institutions.
- The way they conduct operations can also be different. GE firms often focus on exporting or sourcing. They try to fit into the larger global supply chains operated by the multinational (IB) companies who created global sourcing and operate huge supply chains and make substantial foreign direct investments.

Global Entrepreneurship (GlobalE) vs International Business (IB)

- The way GlobalE ventures approach intellectual property may be different with more of an emphasis on the creation of IP and the exploitation of specific proprietary knowledge or IP. IB often looks more at technology transfer and foreign sourcing of research and development. Microsoft, for example, made a huge investment in China with 500 engineers on the edge of the Tsinghua University Campus and did this at a time when they were not able to sell much in China at all. They wanted to be close to what they saw as a significant source of intellectual capital and intellectual property.
- Many countries, especially including China, demand that any foreign direct investments in their country be accompanied by opportunities for technology transfer in the other direction. They want access to outside intellectual property.
- This has become a target for change by the present US administration.



Internationalization models

- Internationalization is a business response to globalization that occurs when a domestic firm begins to sell or operate across national borders.
- It can also describe the activities a company undertakes to expand its limited international activities to more countries.
- With internationalization, firms are confronted with new business practices, laws, regulations, and cultures. A firm can internationalize without operating off-shore; many international firms are importers—firms that acquire their products or services abroad.
- Frequently, internationalization describes a company's first attempts at exporting or licensing.

Culture and Entrepreneurship

- *Culture* is the shared set of beliefs, values, and norms passed from one generation to another that structure a member's perceptions of the world. It is the acquired knowledge that people use to experience, and interpret their own behavior and the behavior of others. If our minds are the *hardware* of intelligence, then culture is the software of the mind. Culture is the programming architecture that organizes our thoughts.
- In a cultural context, members express culture through the behaviors they exhibit, the artifacts they craft, and the political-economic philosophies they embrace. These expressions are based on the values and beliefs they hold about the world around them.
- Social structures like family, religion, language, and education transmit these values and beliefs from generation to generation. In turn, culture influences a country's customs and business practices.
- We will give close attention to the cultural issues in [Chapter 14](#) and in the chapters on area studies (chapters 15-19).

Cultural Considerations in Operations

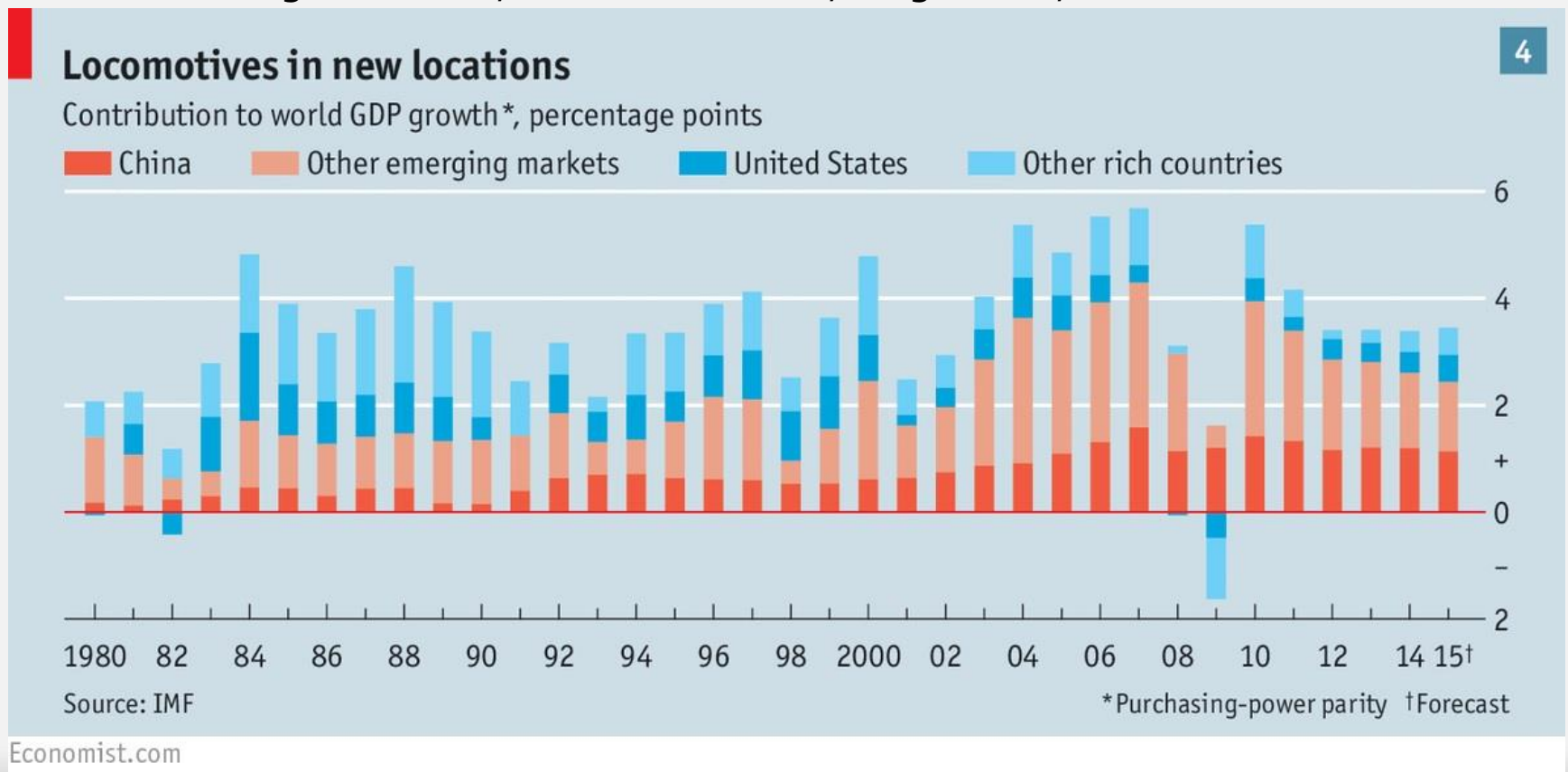
- The basic management tasks of planning, leading, organizing, and controlling are difficult enough when a company operates only in its home country.
- Undertaking these task across national borders with different laws and cultures can be especially complex.
- Planning is less likely to be done in some countries, but in others it is rigorously expected. There are often differences in which stakeholders are expected to be consulted. In Europe, employee groups must be carefully consulted, but in Asia that is less often done. On the other hand, consultation with government is mandatory in Asia. In some countries planning can be done expeditiously and in others it must be carried out without haste.
- Leadership is quite different in different countries. In some cases it is quite hierarchical and in others it requires more grass roots work. How, to whom, and how much one communicates may vary. How employees are motivated can be different.

Cultural Considerations in Operations

- Organizing a company for success requires that one select the right structure for the organization and that employees abilities and tasks be matched to the jobs. It also means that one must think carefully about what kinds of partnerships and alliances, local or global, can be helpful in the operation of the business.
- Control can influence the corporate governance system and which stakeholders must have a formal role. Even the ability to exert control can vary.

Growth in World GDP –China, US, Emerging Markets, Other Rich

- Over the last 35 years China and other emerging markets have begun to contribute the lion's share to growth of world GDP.
 - "Taking a Tumble;" The Economist; August 29, 2015

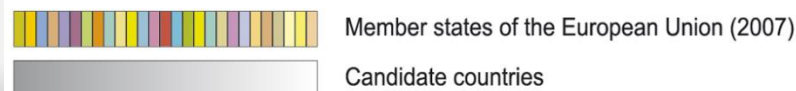


Some of the major changes we have seen

- The European Union has created one of the worlds largest economic blocs consisting of nations that have warred upon one another for centuries.
 - The first steps were taken in 1957, but it took decades to put in place the mechanisms of trade and monetary policy.
 - The Euro was created in 1995, unifying the European Currency. Prior to that, from 1979, there existed a European Currency unit as an internal accounting unit.
 - In 2012-2015, there began to be some major strains in the Eurozone. Have a common currency without also having common fiscal policy was always viewed by economists and financial experts as a precarious situation.
 - Greece, and other Eurozone countries found themselves so deeply in debt that they were unable to pay off their debts. As a member of the Eurozone, Greece was not able to use the usual techniques for indebted nations.
 - Debtor nations can print more money, deflate its value and pay off the debts with cheap currency.
 - When that is not possible, then they can refuse to pay their debts (something like declaring bankruptcy) and then negotiate with their debtors to get them to accept less than the full value of the debt. (This is often called “giving the lenders a haircut.”).
 - The future of the Euro is a work in progress and many feel that unified fiscal policies would be needed to keep the Euro viable.

European Union

- Map as of 2007



Some of the major changes we have seen -2

- The Soviet Union has collapsed (December 25, 1991) leaving the core as Russia, and returning many historic eastern European, Baltic, and Central European countries to self government.

Post-soviet States

- 1. Armenia
- 2. Azerbaijan
- 3. Belarus
- 4. Estonia
- 5. Georgia
- 6. Kazakhstan
- 7. Kyrgyzstan
- 8. Latvia
- 9. Lithuania
- 10. Moldova
- 11. Russia
- 12. Tajikistan
- 13. Turkmenistan
- 14. Ukraine
- 15. Uzbekistan

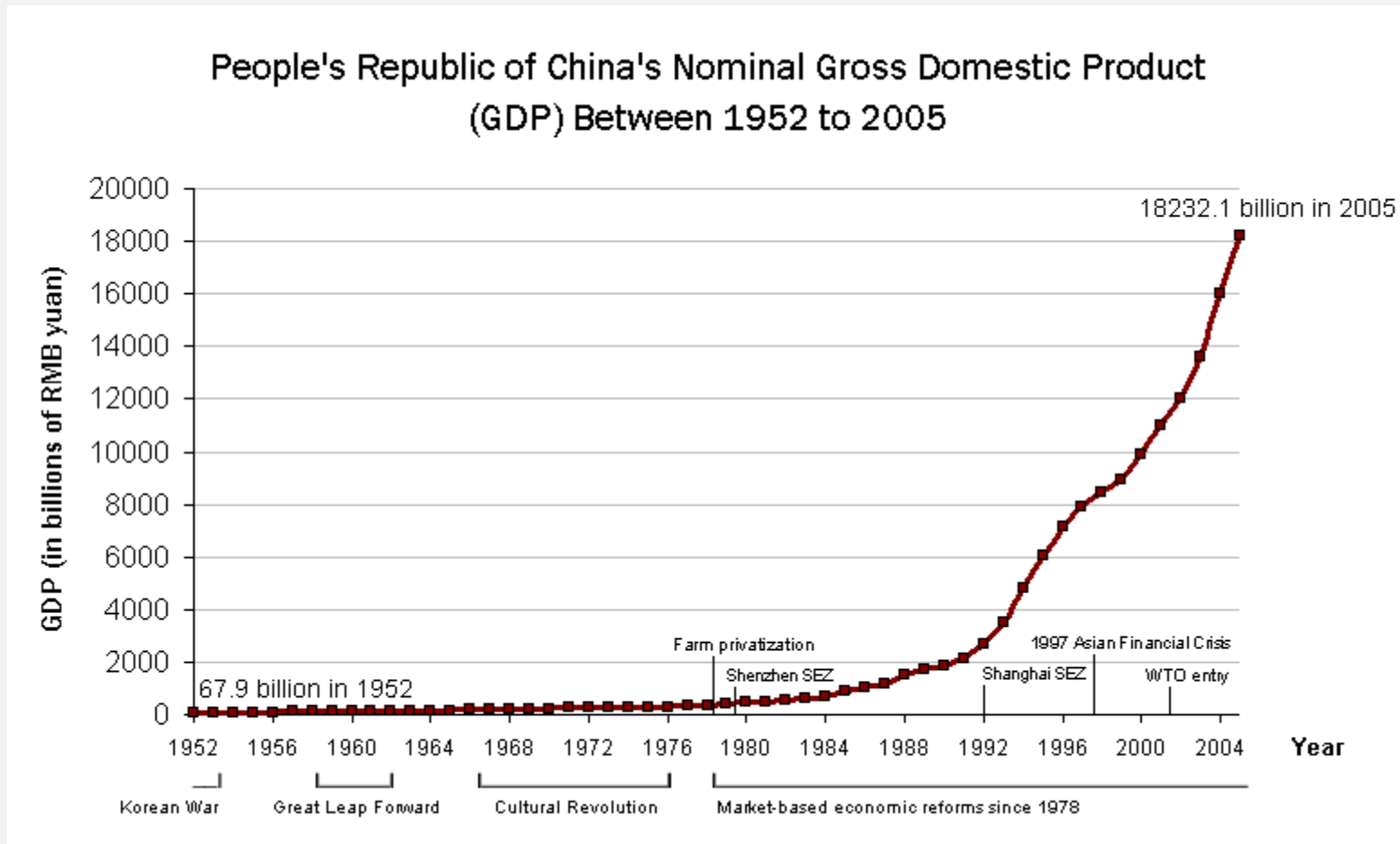


Some of the major changes we have seen -3

- China has liberalized its politics, regulatory framework, and economic system.
- Chinese economic reforms called "*Socialism with Chinese characteristics*" in the People's Republic of China (PRC)
 - was started in December 1978 by reformists within the Communist Party of China (CPC) led by Deng Xiaoping.
- The first stage, in the late 1970s and early 1980s, involved the de-collectivization of agriculture, the opening up of the country to foreign investment, and **permission for entrepreneurs** to start businesses. However, most industry remained state-owned.
- The second stage of reform, in the late 1980s and 1990s, involved the privatization and contracting out of much state-owned industry and the lifting of price controls, protectionist policies, and regulations, although state monopolies in sectors such as banking and petroleum remained.
- In 2015, Chinese growth slowed appreciably causing the government to undertake economic stimulus programs.

China

- China (http://en.wikipedia.org/wiki/Chinese_economic_reform)



Economies of South, East, and South East Asia

(http://en.wikipedia.org/wiki/Economy_of_Asia)

Country or territory	GDP nominal millions of USD	Sort by per Capita GDP (PPP) Country or territory	GDP PPP per capita USD
China (PRC)	9,181.4	Singapore	64,584
Japan	4,901.5	Macau SAR of China	59,451
India	1,870.7	Brunei	53,431
South Korea	1,221.8	Hong Kong SAR of China	52,722
Indonesia	870.3	Taiwan	39,767
Taiwan	489.2	Japan	36,899
Thailand	387.2	South Korea	33,189
Malaysia	312.4	East Timor	21,705
Singapore	295.7	Malaysia	17,748
Hong Kong SAR of China	273.7	Thailand	9,874
Philippines	272.0	China (PRC)	9,844
Pakistan	238.7	Maldives	9,173
Vietnam	170.6	Philippines	6,597
Bangladesh	161.8	Sri Lanka	6,531
Sri Lanka	65.8	Bhutan	6,370
Burma	56.4	Mongolia	5,885
North Korea	28.0	Indonesia	5,214
Macau SAR of China	22.1	India	4,077
Afghanistan	20.7	Vietnam	4,012
Nepal	19.3	Bangladesh	3,167
Brunei	16.2	Pakistan	3,149
Papua New Guinea	16.0	Laos	3,068
Cambodia	15.7	Papua New Guinea	2,834
Mongolia	11.5	Cambodia	2,576
Laos	10.0	North Korea	1,900
East Timor	6.1	Burma	1,739
Maldives	2.3	Nepal	1,508
Bhutan	2.0	Afghanistan	1,150

West Asia

Country or territory	GDP nominal millions of USD	GDP PPP per capita USD
Turkey	827.209	15,353
Saudi Arabia	745.273	31,245
United Arab Emirates	396.235	30,122
Iran	366.259	12,264
Israel	291.500	34,770
Iraq	229.327	7,391
Qatar	202.651	98,814
Kuwait	185.319	39,706
Oman	80.571	29,813
Azerbaijan	73.537	11,044
Syria	59.633	5,108
Lebanon	44.318	14,845
Yemen	39.152	2,316
Jordan	33.860	6,115
Bahrain	32.215	34,584
Cyprus	21.827	25,265
Georgia	16.162	6,145
Armenia	10.547	6,191

Central Asia

Country or territory	GDP nominal millions of USD	GDP PPP per capita USD
Kazakhstan	220.347	14,391
Uzbekistan	56.476	3,762
Turkmenistan	40.569	9,510
Tajikistan	8.497	2,354
Kyrgyzstan	7.225	2,611

Some of the major changes we have seen -4

Latin America –led by Brazil –has seen strong economic growth.

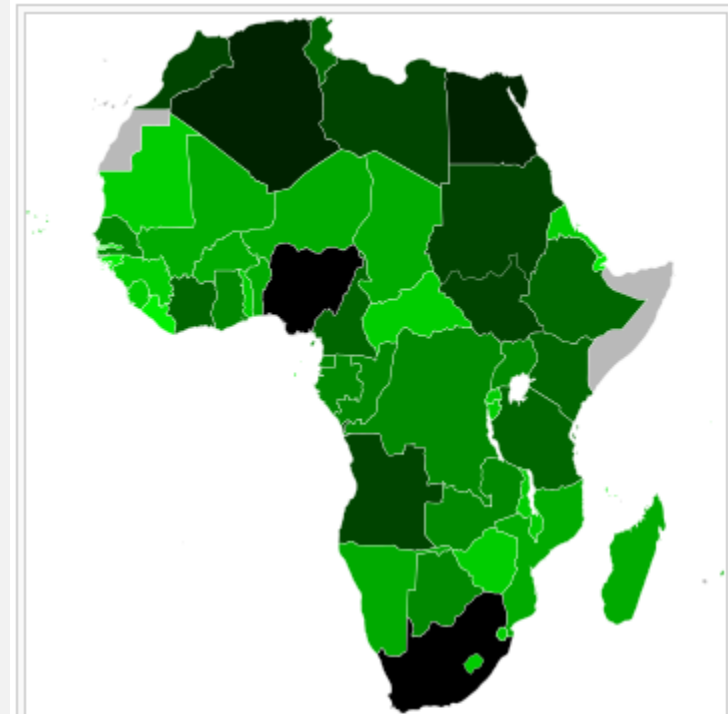


Some of the major changes we have seen -5

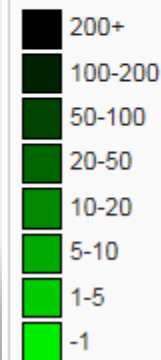
- South Africa has overcome apartheid and grown to lead African Economic Development.
- Egypt experienced what many called “the Arab Spring” as they overthrew the long term government of Hosni Mubarek in 2011. Later elections in 2012 brought Mohammed Morsi to power. After he issued edicts placing himself above the law, he was forced to rescind those edicts and eventually removed from power by the military in July 2013.
- Other North Africa Countries such as Libya and Tunisia (where the Arab spring began in 2010) saw changes in Government and instability.
- Political instability has been a major challenge for economic development throughout Africa -with much of that due to the struggle for power between Islamic and non-Islamic groups.

African Economic Development

- http://en.wikipedia.org/wiki/Economy_of_Africa
- The unevenness of African development and the instability of governments, particularly in the north (the Maghreb), is a major challenge to economic development.



National GDP per capita ranges from wealthier countries the north and south to poorer states in the east. These nominal GDP figures from the World Bank (2008) are converted to billions of US dollars.



Africa –largest GDP

Country	Total GDP (nominal) (billion US\$)	GDP per capita (US\$, PPP)	GDP Growth (%), 2007-2011
Nigeria (2013)	509.9	5,863	6.8
South Africa	408.2	11,035	2.7
Egypt	229.5	6,324	5.2
Algeria	188.7	8,715	2.7
Angola	101.0	5,930	9.1
Morocco	100.2	4,986	4.3
Libya (2009)	62.4	16,855	4.0
Sudan	55.1	2,141	4.1
Tunisia	45.9	9,415	3.0
Ghana	39.2	1,884	8.3
Kenya	33.6	1,718	4.2
Ethiopia	31.7	1,116	9.7
Cameroon	25.5	2,383	3.1
Ivory Coast	24.1	1,803	1.1
Tanzania	23.7	1,521	6.8
Equatorial Guinea	19.8	36,515	8.8
Zambia	19.2	1,623	6.4
Botswana	17.6	14,753	3.0
Gabon	17.1	15,960	3.6
Uganda	16.8	1,354	7.4
Réunion (France)	16.0	8,233	
Democratic Republic of the Congo	15.6	375	5.9
Congo	14.7	4,429	4.9
Senegal	14.3	1,981	3.5
Mozambique	12.8	982	6.9
Namibia	12.3	6,826	3.7
Mauritius	11.3	14,523	4.5
Mali	10.6	1,099	4.5
Burkina Faso	10.2	1,310	4.9
Madagascar	9.9	972	2.3
Zimbabwe	9.9 (N/A)		0.6

Worlds largest markets ([http://en.wikipedia.org/wiki/List_of_countries_by_GDP_\(nominal\)](http://en.wikipedia.org/wiki/List_of_countries_by_GDP_(nominal)))

List by the International Monetary Fund (2014)

Rank ↕	Country/Region ↕	GDP (Millions of US\$) ↕			
	<i>World</i>	77,301,958 ^[9]			
	 <i>European Union</i> ^[n 1]	18,495,349 ^[9]			
1	 United States	17,418,925	16	 Indonesia	888,648
2	 China	10,380,380 ^[n 2]	17	 Netherlands	866,354
3	 Japan	4,616,335	18	 Turkey	806,108
4	 Germany	3,859,547	19	 Saudi Arabia	752,459
5	 United Kingdom	3,056,499	20	 Switzerland	712,050
6	 France	2,846,889	21	 Nigeria	573,652
7	 Brazil	2,353,025	22	 Sweden	570,137
8	 Italy	2,147,952	23	 Poland	546,644
9	 India	2,049,501	24	 Argentina	540,164
10	 Russia	1,857,461 ^[n 3]	25	 Belgium	534,672
11	 Canada	1,788,717	26	 Taiwan	529,550
12	 Australia	1,444,189	27	 Norway	500,244
13	 South Korea	1,416,949	28	 Austria	437,123
14	 Spain	1,406,855	29	 Iran	404,132
15	 Mexico	1,282,725	30	 United Arab Emirates	401,647

Economy Types

- Stage 1 'factor'-driven economies,
 - where countries compete primarily on the use of unskilled labor and natural resources and companies compete on the basis of price as they buy and sell basic products or commodities.
- Stage 2 'efficiency'-driven economies,
 - where growth is based on the development of more efficient production processes and increased product quality.
- Stage 3 'innovation'-driven economies,
 - where companies compete by producing and delivering new and different products and services by using the most sophisticated processes.

GEM ECONOMIES BY GEOGRAPHIC REGION AND ECONOMIC DEVELOPMENT LEVEL, 2014

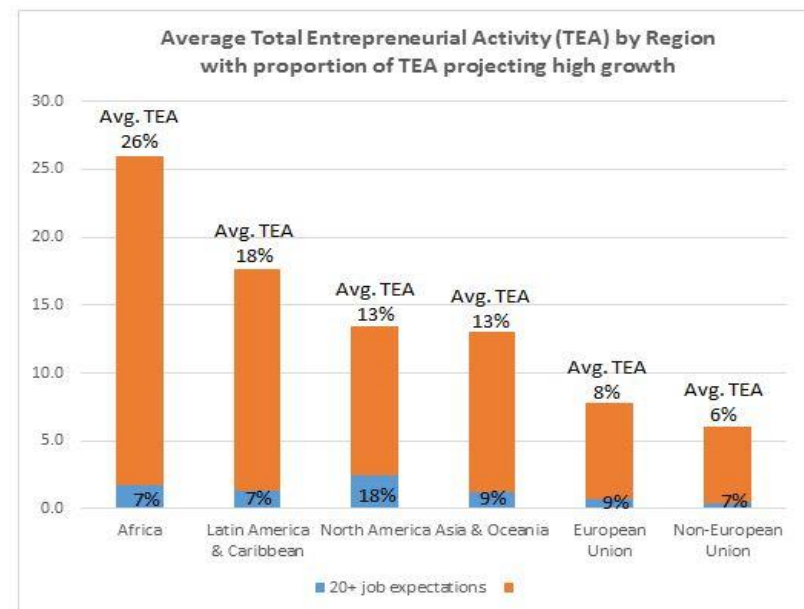
	<i>Factor-driven Economies</i>	<i>Efficiency-driven Economies</i>	<i>Innovation-driven Economies</i>
Africa	Angola ¹⁾ , Botswana ¹⁾ , Burkina Faso, Cameroon, Uganda	South Africa	
Asia & Oceania	India, Iran ¹⁾ , Kuwait ¹⁾ , Philippines ¹⁾ , Vietnam	China, Indonesia, Kazakhstan ²⁾ , Malaysia ²⁾ , Thailand	Australia, Japan, Singapore, Taiwan, Qatar
Latin America & Caribbean	Bolivia ¹⁾	Argentina ²⁾ , Barbados ²⁾ , Belize, Brazil ²⁾ , Chile ²⁾ , Colombia, Costa Rica ²⁾ , Ecuador, El Salvador, Guatemala, Jamaica, Mexico ²⁾ , Panama ²⁾ , Peru, Suriname ²⁾ , Uruguay ²⁾	Puerto Rico, Trinidad and Tobago
European Union		Croatia ²⁾ , Hungary ²⁾ , Lithuania ²⁾ , Poland ²⁾ , Romania	Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Luxembourg, Netherlands, Portugal, Slovenia, Slovakia, Spain, Sweden, United Kingdom
Non-European Union		Bosnia and Herzegovina, Georgia, Kosovo, Russian Federation ²⁾ , Turkey ²⁾	Norway, Switzerland
North America			Canada, United States

- 1) In transition to Efficiency-driven economies
 2) In transition to Innovation-driven economies

GEM Results in 2014

– (<http://www.babson.edu/news-events/babson-news/Pages/2015-gem-global-report-shows-ambition-rising.aspx>)

- Entrepreneurs in factor-driven economies are more positive about entrepreneurial opportunities to start a new venture and the belief in their abilities to do so. Factor-driven economies tend to move forward in relationship to their levels of institutional support, infrastructure, macroeconomic stability, and health and primary education. Fear of failure, however, is highest among entrepreneurs in innovation-driven economies where innovation and productivity growth are central to economic development.
- African economies report the highest perception of opportunities and perceived skills to act entrepreneurially with the lowest fear of failure rates.
- European Union economies are less optimistic about entrepreneurial opportunities and expressed the lowest perception globally (19.9 percent - Greece; 18.4 percent in Croatia; 17.2 percent in Slovenia; 22.6 percent in Spain; 22.9 percent in Portugal).
- The social value of entrepreneurs varies globally. Starting a new venture is seen as a good career choice in Africa and North America. High status and high media attention are also associated with entrepreneurship in these regions. European Union economies reported the lowest social value ratings.

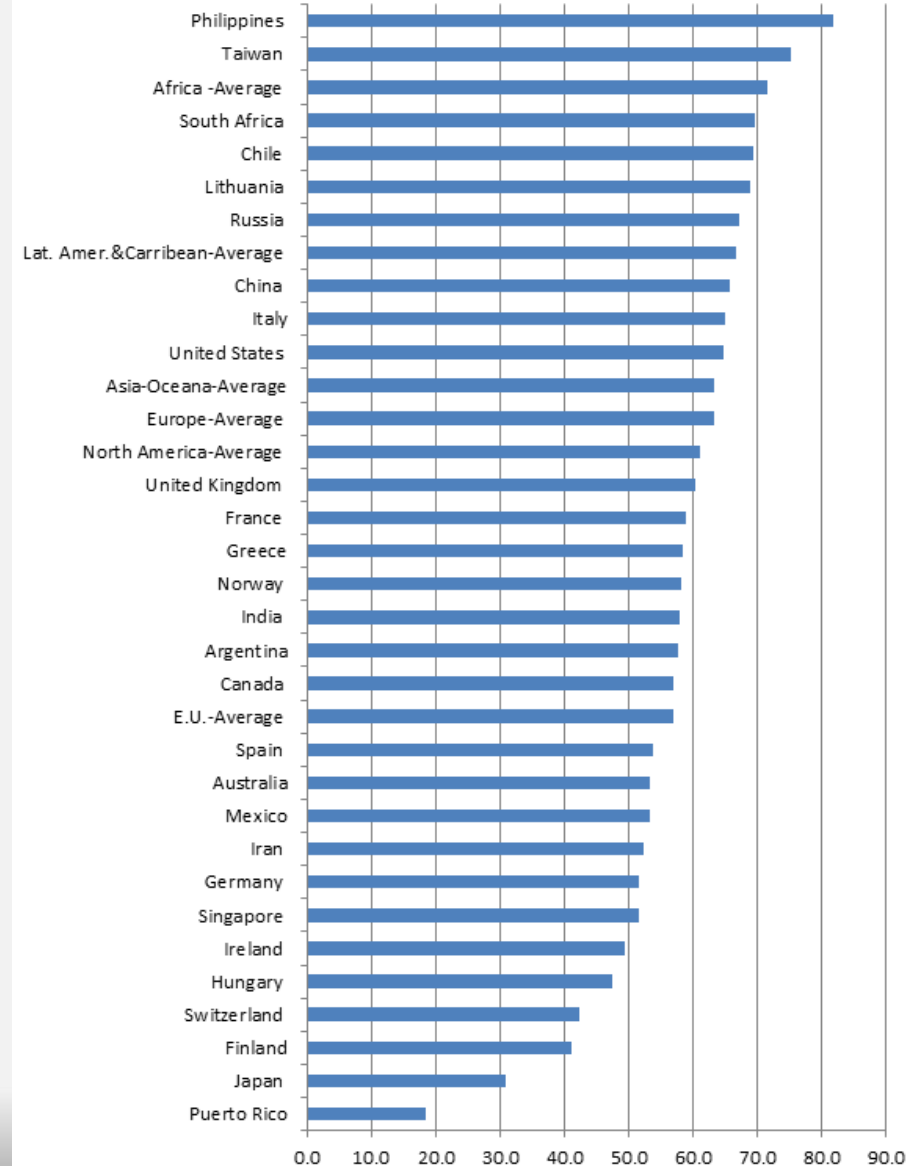


GEMS- 2014 Survey

- Global Entrepreneurship Monitor
- 2014 Global Report
 - <http://www.gemconsortium.org/report>

This is the percent of the local population that agrees that Entrepreneurship is a good career choice.

As you can see, there is significant variation among the various countries.



A good reference on entrepreneurial education and training in various countries.

- A Global Perspective on Entrepreneurship Education and Training
 - Alicia Coduras Martínez, Jonathan Levie, Donna J. Kelley, ögnvaldur J. Sæmundsson and Thomas Schøtt
 - <http://www.babson.edu/Academics/centers/blank-center/global-research/gem/Documents/gem-2010-special-report-education-training.pdf>

What is Entrepreneurship?

Most of you will come to this course with some understanding of what entrepreneurship is, who entrepreneurs are, and what those entrepreneurs do. We develop those understandings because of the things we read and see in the media and the people we meet in our lives. As with so many things, our personal experience is often a small window into the field and may or may not reflect the larger picture that could be developed with more extensive experience.

In order to create that larger picture, we need to draw upon both a larger set of experiences (primary research) and upon the research and study done by others (secondary research) who have taken a systematic look at the field. This research has also shown that there are some widely held misconceptions (often termed “myths”) about entrepreneurs and entrepreneurship.

We will consider some example entrepreneurs. We will confront the myths, and we will try to develop a more accurate and evidence driven insight into entrepreneurship and entrepreneurs.

Technological Entrepreneurship

Inventions and applications of new technologies often change the world in very profound ways. The invention of the practical steam engine in 1765 James Watt drove the following industrial revolution and remade transportation systems eventually creating the steam ship and the steam locomotive. Like all inventors, Watt built on earlier, but less practical work by others like Newcomen and Savery. There was even a crude version of a steam engine created by the Greek scientist Hero of Alexandria in the first century CE.

- <http://www.livescience.com/44186-who-invented-the-steam-engine.html>
- <http://www.history.com/topics/industrial-revolution>

Like all technologies, before and since, there were those who resented and resisted the new ways. The Luddites in England often attacked factories and destroyed equipment. Today we often refer to those who resist new technologies as "**Luddites**."

In 1936, Charlie Chaplin, made a film depicting the challenges of living in "**Modern Times**" that captured the angst of those who found technological change difficult. (This picture from "Modern Times" is in the public domain.)



Do these people look like entrepreneurs?



← Top Left Apple Founders -1978
Steve Jobs and Steve "Woz"
Wozniak

Microsoft Founders -1978 ->
Top-Steve Wood, Bob Wallace, Jim
Lane
Mid- Bob O'Rear, Bob Greenberg,
Mark McDonald, Gordon Letwin
Front – Bill Gates, Andrea Lewis,
Marla Wood, Paul Allen



Interesting Entrepreneurs: Bill Gates

Bill Gates –Microsoft founder

- The picture is under the creative commons license by Agency Brazil.

Gates was a computer whiz from his pre-teen years on. He dropped out of Harvard to start a software company along with his friend Paul Allen. When IBM was trying to find an operating system for their new PC, they began negotiating with an existing OS, CPM, but the negotiations broke down. Some claimed that it was because IBM was too cheap to pay the license fee and thought they could clone it for less. IBM claimed that CPM was not being responsive in the negotiations. In the end, IBM, hired GATES and Allen to create a clone of CPM. Foolishly, they did not negotiate an exclusive license and thus Microsoft was able to license the OS to other computer companies that were building clones of the IBM PC. The rest is multi-billion dollar history.

Gates, along with Warren Buffet and other entrepreneurs, signed the Giving Pledge in which they promised to give away most of their fortune. He and his wife then created the Gates Foundation

Microsoft's effort to get traction in the Chinese market is an interesting case for Global Entrepreneurship. Microsoft wanted to enter China, but faced formidable challenges in intellectual property protection and government regulation. They entered anyway with 500 engineers in a building on the Tsinghua University Campus.

Why? They had to be close to an important source of intellectual capital and they wanted to maintain some position in the fastest growing market in the world.

- <http://www.jackmwilson.net/Cases/Case-BillGates.pdf>



Interesting Entrepreneurs

Mother Theresa was born as Agnes Gonxha Bojaxhiu. She was an Albanian who was born in Macedonia. Her father was an entrepreneur in construction and trading. She went to India and founded the Order of the Missionaries of Charity



Jim O'Keefe, a veteran of GE, Image systems, and the second ILINC President, visited her during GE period and called Jack Welch to tell him how she had created an incredible charitable enterprise with amazing entrepreneurial skill. She was a social entrepreneur.

- "As the ranks of her congregation swelled and donations poured in from around India and across the globe, the scope of Mother Teresa's charitable activities expanded exponentially. Over the course of the 1950s and 1960s, she established a leper colony, an orphanage, a nursing home, a family clinic and a string of mobile health clinics."
- "By the time of her death in 1997, the Missionaries of Charity numbered over 4,000 -- in addition to thousands more lay volunteers -- with 610 foundations in 123 countries on all seven continents." - <http://www.biography.com/people/mother-teresa-9504160>
- (Photo: © 1986 **Túrelío** (via Wikimedia-Commons), 1986 / Lizenz: [Creative Commons CC-BY-SA-2.0 de](https://creativecommons.org/licenses/by-sa/2.0/de/))

Nonspec -A student generated company

Nonspec (previously known as Developing Nation Prosthetics) provides low cost, high functionality replacement limbs with an acceptable amount of customization for children in other nations.

The team consists of Katherine Cain, Jonathan De Alderete, Brendan Donoghue, Sean Gibson, Olivia Keane and Erin Keaney with majors in plastics and mechanical engineering, as well as minors in business administration and history.

<https://www.uml.edu/Innovation-Entrepreneurship/DifferenceMaker/Meet-the-DifferenceMakers/DM-Nonspec.aspx>

(Photo: J.M. Wilson)

[Case: NonSpec](#)

LOCAL — PAGE 3

THE SUN

WEDNESDAY
June 10, 2015 Lowell, Massachusetts
\$1.00

Two floors, no ceiling on invention

UML business incubator opens in rehabbed canal district building

By Robert Mills
rmills@lowellsun.com

LOWELL — Catherine Pujol-Baxley started on Tuesday about 9 a.m., the first scientist to work in the new research space at UMass Lowell's business incubator in the Hamilton Canal District.

The incubator is the first commercial property to open its doors in the Hamilton Canal District, a prominent part of the city at the edge of the downtown, long home to little but abandoned buildings and vacant lots. It makes its home on the top floor of the former Freudenberg Non-novens mill at 110 Canal St.

Pujol-Baxley is director of research and development for KnipBio, a start-up that is engineering micro-organisms to improve the quality of food used in aquaculture, also known as fish farming.

UMass Lowell leases the top



A PLACE TO EXPLORE: Erin Keaney, co-founder and CEO of Nonspec, and Brendan Donoghue, right, a 2015 UML graduate who is an intern at Nonspec, show a prosthetic foot to UMass President Emeritus Jack Wilson at UML's new incubator at 110 Canal St. Below, from left, Steve O'Riorden, UML associate vice chairman for financial services, UML Government Relations Associate Colleen Brady and Director of University Events Rick Sherburne take in the view.

SUN PHOTOS / JULIA MALAKIE

two floors of the building, with 11,000 square feet of space on each floor meant to help grow start-ups in the biotech and medical-device fields.

The facility is home to two separate but related programs — the UMass Lowell Innovation Hub, on the fourth floor, and an extension of the university's Massachusetts Medical Device Development Center,



Please see **INCUBATOR/10**

Richard Branson

- Sir Richard Charles Nicholas Branson
 - born July 18, 1950 in London
- Branson is the seventh richest citizen of the United Kingdom,
 - estimated net worth of \$4.9 billion (U.S.)
 - <http://www.forbes.com/profile/richard-branson/>
 - http://en.wikipedia.org/wiki/Richard_Branson
- Severe Dyslexic (like me!)
 - on his last day at school, his headmaster, Robert Drayson, told him he would either end up in prison or become a millionaire
 - Richard Branson. "At school I was dyslexic and a dunce.", *The Times*, London, 11 September 1998, pg. 19
- He founded Virgin Records and then Virgin Megastore, Virgin Atlantic Airline, Virgin Trains, and Virgin Galactic
- He helped form and fund "The Elders" with Nelson Mandela and others who were devoted to helping to solve world problems.



Photo by Freelance photographer Richard Burdett (Website) - Own work, taken at eTalk Festival Party., CC BY 3.0, <https://commons.wikimedia.org/w/index.php?curid=4745245>

<http://www.jackmwilson.net/Cases/Case-RichardBranson-Virgin.pdf>

Teresa Mbagaya, EcoSchool

- Teresa Mbagaya, Zimbabwe
 - Born in Kenya
 - Graduate of Cambridge and Yale
 - Worked at Google on Education Services and Emerging Market Outreach teams
 - 2013 left Google and joined Econet Wireless
 - Econet Zero targets 5 million Econet Broadband subscribers offering them free access to 50+ education websites including Coursera, EdX, Wikipedia, Codecademy and others
 - launched EcoSchool Academy to all 9 million subscribers, an interactive mobile learning environment which provides 50 short courses covering a range of topics.
 - Econet Education has reduced the costs for Medical Students in Zimbabwe, providing tablets on which they can access their text books at significant savings.
- <https://www.ecoschool.co.zw/>
- <http://www.techzim.co.zw/2014/10/everything-need-know-econets-ecoschool/>
- <http://www.forbes.com/sites/mfonobongnsehe/2015/02/05/30-most-promising-young-entrepreneurs-in-africa-2015/2/>
- <http://www.aworldatschool.org/news/entry/eco-school-pilot-scheme-slashes-cost-of-learning-in-zimbabwe>
- Photo by Teresa Mbgaya via twitter.
 - Case: <http://www.jackmwilson.net/Cases/Case-EcoSchool-Africa.pdf>



Mark Zuckerberg

Mark Zuckerberg is another Harvard dropout who created FaceMash while still a student.

He was always a computer geek and a gamer. Some say he was socially inept while others disagree.

He also signed the Giving Pledge and has already given \$100 million to Newark Schools



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Muhammad Yunus



- Bangladesh
- Chittagong College
- Dhaka College
- PhD Economics Vanderbilt
- Professor Economics in Bangladesh
- Founded profitable packaging company
- Invented microcredit and microfinance
- Nobel Peace Prize
- Founder of Grameen Bank
 - In the late 1980s, Grameen started to diversify by attending to underutilized fishing ponds and irrigation pumps like deep tube wells.[21] In 1989, these diversified interests started growing into separate organizations. The fisheries project became Grameen Motsho ("Grameen Fisheries Foundation") and the irrigation project became Grameen Krishi ("Grameen Agriculture Foundation").[21] In time, the Grameen initiative grew into a multi-faceted group of profitable and non-profit ventures, including major projects like Grameen Trust and Grameen Fund, which runs equity projects like Grameen Software Limited, Grameen CyberNet Limited, and Grameen Knitwear Limited,[22] as well as Grameen Telecom, which has a stake in Grameenphone (GP), the biggest private phone company in Bangladesh.[23] From its start in March 1997 to 2007, GP's Village Phone (Polli Phone) project had brought cell-phone ownership to 260,000 rural poor in over 50,000 villages.[24]
 - The success of the Grameen microfinance model inspired similar efforts in about 100 developing countries and even in developed countries including the United States.[25] Many microcredit projects retain Grameen's emphasis of lending to women. More than 94% of Grameen loans have gone to women, who suffer disproportionately from poverty and who are more likely than men to devote their earnings to their families
- Case: Muhammad Yunus
 - <http://www.jackmwilson.net/Entrepreneurship/Cases/Case-MuhammadYunas.pdf>

Steve Jobs

- *Don't let the noise of other's opinions drown out your own inner voice. And most importantly, have the courage to follow your heart and intuition. They somehow already know what you truly want to become. Everything else is secondary.*
 - Steve Jobs
- Cofounder of Apple, NeXT, and Pixar
- Visionary of iPod, iPhone, iPad, iTunes, Macintosh, Apple II, etc.
 - "You've got to start with the customer experience and work back toward the technology - not the other way around."
 - "A lot of times, people don't know what they want until you show it to them."
- Case: Apple and the Global supply chain
 - <http://www.jackmwilson.net/Entrepreneurship/Cases/Case-Apple-Supplychain.pdf>



Harish Hande '98 '00

- UML MS '98 renewable energy engineering
- UML PhD '00 in mechanical engineering (energy)
- co-founded Solar Electric Light Co. India in 1995.
 - As SELCO's managing director, he has pioneered access to solar electricity for more than half a million people in India, where more than half the population does not have electricity, through customized home-lighting systems and innovative financing.
- Hande received the 2011 Magsaysay Award, widely considered Asia's equivalent of the Nobel Prize,
- One of 21 Young Leaders for India's 21st Century by Business Today
- Social Entrepreneur of the Year for 2007 by the Schwab Foundation for Social Entrepreneurship and the Nand and Jeep Khemkha Foundation.
- Case: SELCO and Harish Hande
 - <http://www.jackmwilson.net/Entrepreneurship/Cases/Case-SolarElectricLight-HarishHand.pdf>



Gururaj “Desh” Deshpande

- Born in India
- Indian Institute of Technology
- PhD Queens University, Ontario
- Motorola
- 1990 Founded Cascade Communications (networking devices)
- Sold Cascade to Ascend Comm. for \$3.7 billion in 1997
- Founded Sycamore Networks in 1998 (\$18 B in 1999)
- Founded Tejas Networks and A123 Systems
- Founded MIT Deshpande Center with \$20 million donation
- The Deshpande Education Trust (DET) -the Master of Social Entrepreneurship program.
 - The Master of Social Entrepreneurship (MSE) is a two-year residential program affiliated with Karnatak University Dharwad India
- Founded Merrimac Valley Sandbox at UML (Now eForAll)
- Founded the *Deshpande Symposium for Innovation & Entrepreneurship in Higher Education* at UML.
 - <http://www.deshpandesymposium.org/>
- *Case: Desh Deshpande*
 - <http://www.jackmwilson.net/Entrepreneurship/Cases/Case-GururajDeshpande.pdf>



John Pulichino '67

- John Pulichino-Joy Tong Building
- Industrial Management
- Polaroid
- American Tourister (President and CEO)
- Founded Innovation Luggage in 1993
 - bankrupt in 2001
- Joy Tong, wife, founded Group Three International Limited (1984).
 - He became CEO and she Creative Director
- 2003 licensing agreement between Group III and Wenger, maker of the 100-year-old Genuine Swiss Army Knife brand,
 - has generated a company that, since 2003, has done more than \$400 million in sales. With offices in Florida, Taiwan and Mainland China, Group III now distributes more than 60 products through Target Stores alone.
 - Recently (circa 2012) sold firm to private equity group.
 - In 2015, they bought the company back from the private equity investor who had bought it a few years before!
- Donated about \$5 million to UML for scholarships and building
- Case: Group III International –John Pulichino
 - <http://www.jackmwilson.net/Entrepreneurship/Cases/Case-Pulichino-Tong.pdf>



Manijeh Nazari Goldberg

- Emigrated from Tehran, Iran
- Was unable to study Nuclear Engineering as she had planned
- UMass Lowell BS Engineering (Civil)
- UML MS Computer Science
- MIT MBA
- Working with MIT Prof. Bob Langer (2nd from left) to develop drug platform.
- Privo Technologies
 - MIT 100 K Award winner
 - Nano delivery of insulin by chewing gum
 - Nano Drug Delivery
- They are in the early stages of development of a company offering a platform for nano-delivery of drugs.
- They are working in a very tough area of raising money to commercialize an emerging technology.
- Case: Privo - <http://www.jackmwilson.net/Entrepreneurship/Cases/Case-Privo.pdf>



Marcos Galperin -Mercado Libre

- Marcos Galperin was born in Buenos Aires
 - Colegio San Andres in Olivos, Buenos Aires
 - Attended Wharton School at Univ. of Pennsylvania but left
 - Returned to Stanford for MBA (1999).
- Founded Mercado Libre in 1999 assisted by Prof. Jack McDonald
 - John Muse, Muse private equity fund, first investor
 - funding from JPMorgan Partners, Flatiron Partners, Hicks Muse Tate and Furst, Goldman Sachs, GE Capital and Banco Santander Central Hispano.
 - In September 2001 eBay acquired 19.5% of MercadoLibre
- MercadoLibre.com (literally "free market" in Spanish) or *MercadoLivre* in Portuguese (Brazil, Portugal) is an Argentine online marketplace dedicated to e-commerce and online auctions.
- Latin America's number-one e-commerce site.
 - present in Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Mexico, Ecuador, Peru, Panama, Portugal, Uruguay and Venezuela.
 - <http://en.wikipedia.org/wiki/MercadoLibre.com>
 - http://en.wikipedia.org/wiki/Marcos_Galperin
- Case: <http://www.jackmwilson.net/Cases/Case-MercadoLibre.pdf>



Mubarak Muyika --Zagace Company

- Orphaned by ten years old
- Nairobi Kenya
- Turned down Harvard full scholarship in 2011
- Hype Century Technologies and Investments Ltd, (Jan. 2012)
 - web-design and domain registration
- Won Anzisha Prize in South Africa in 2014.
 - (Sh1.1 million).
 - African entrepreneurs aged between 15 and 21 who have developed innovative businesses which have positively impacted on communities.
- Sold HCT in May 2014
- Founded Zagace Company soon thereafter
- <http://www.businessdailyafrica.com/Investor-shuns-Harvard-to-pursue-tech-dream/-/1248928/1976952/-/12p6bopz/-/index.html>
- <http://www.forbes.com/sites/mfonobongnsehe/2015/02/05/30-most-promising-young-entrepreneurs-in-africa-2015/4/>



Robin Lee (Li Yanhong) and Eric Xu (Eric Xu Yong) -Baidu

- Robin Lee- born Shanxi Province, China attended Peking University then SUNY Buffalo to study Computer Science. Now serves as CEO of Baidu.
- Eric Xu Young –born in China, attended Peking University (BS and MS), PHD in Biology from Texas A&M and post-doctoral research at University of California Berkeley. Now founded YIFANG Group Holdings Limited, a venture capital company, and several charitable organizations. Worked in two California start-ups before returning to China to found Baidu in 1999.
- Baidu 百度, Inc. (Chinese: 百度; pinyin: Bǎidù, pronounced "BY-doo" in English), incorporated on January 18, 2000, is a Chinese web services company headquartered at the Baidu Campus in Beijing's Haidian District.[5]
- Baidu offers many services, including a Chinese language-search engine for websites, audio files and images. Baidu offers 57 search and community services including Baidu Baike (an online, collaboratively-built encyclopedia) and a searchable, keyword-based discussion forum.[6] Baidu was established in 2000 by Robin Li and Eric Xu. Both of the co-founders are Chinese nationals who studied and worked overseas before returning to China. In March 2015, Baidu ranked 4th overall in the Alexa Internet rankings.[7] During Q4 of 2010, it is estimated that there were 4.02 billion search queries in China of which Baidu had a market share of 56.6%. China's Internet-search revenue share in second quarter 2011 by Baidu is 76%.[8] In December 2007, Baidu became the first Chinese company to be included in the NASDAQ-100 index.[9]
- Baidu provides an index of over 740 million web pages, 80 million images, and 10 million multimedia files.[10] Baidu offers multimedia content including MP3 music, and movies, and is the first in China to offer Wireless Application Protocol (WAP) and personal digital assistant (PDA)-based mobile search.
 - <http://en.wikipedia.org/wiki/Baidu>
 - http://en.wikipedia.org/wiki/Robin_Li
 - http://en.wikipedia.org/wiki/Eric_Xu
- Case: <http://www.jackmwilson.net/Cases/Case-Baidu.pdf>



- Jack Ma (Ma Yun) born in 1964 in Hangzhou, Zhejiang Province, China.
 - Richest man in China (18 in World)
 - failed the university entrance exam three times
 - 1988 graduated from Hangzhou Normal University in English
- In 1999, Jack Ma founded the website Alibaba.com, a business-to-business portal to connect Chinese manufacturers with overseas buyers.
- provides consumer-to-consumer, business-to-consumer and business-to-business sales services via web portals. It also provides electronic payment services, a shopping search engine and data-centric cloud computing services.
- In 2012, two of Alibaba's portals handled 1.1 trillion yuan (\$170 billion) in sales.
- Alibaba's market value was measured as US\$231 billion at its historic initial public offering (IPO) on September 19, 2014.
 - <http://en.wikipedia.org/wiki/Baidu>
 - http://en.wikipedia.org/wiki/Jack_Ma
 - <http://www.bloomberg.com/news/articles/2014-11-09/ma-says-alibaba-shareholders-should-feel-love-not-no-3>
 - <http://www.bloomberg.com/bw/articles/2012-06-14/jack-ma-is-the-loneliest-billionaire-in-china>
 - <http://www.economist.com/news/leaders/21573981-chinas-e-commerce-giant-could-generate-enormous-wealth-provided-countrys-rulers-leave-it>
- Case: <http://www.jackmwilson.net/Cases/Case-Alibaba.pdf>



Who ARE these people?

Think back for a moment about the entrepreneurs that you just read about. What did you notice? What do they have in common? How are they different?

Compare this group to the image that you previously had in your mind of an entrepreneur based upon your past experiences. What kinds of differences did you see? Which of your previous impressions were changed and which remained the same or were reinforced.

Consider your own ideas of what “wealth” and “profit” means to you. Did this mean the same thing to all of these entrepreneurs? If you had to guess, based upon what little you know of these individuals, do you think that they were all motivated by the same things?

Is there any way you could describe their motivations that might fit all of them?

Did they all want to

- Make money?
- Change the world?
- Make a difference?
- Do their own thing?
- Be their own boss?
- Be a widely recognized public figure?
- Take tremendous risks?

Diverse group with diverse motives.

- Now you can see that Entrepreneurs are a very diverse group.
- You can see that they are all motivated for a passion for changing something in the world.
- Some appear to be financially motivated and others seem to be socially motivated. Some were both!
- Many graduates of UMass Lowell have gone on to be successful entrepreneurs in a variety of fields.
- Entrepreneurship is often a global phenomena.
- All of the entrepreneurs have done something innovative:
 - Some were driven by technology.
 - Some created different ways of doing business –different business models
 - Some approached important social problems with innovative approaches
 - All faced and overcame obstacles as they followed their passion.

Let us now return to Nonspec -A student generated company

Nonspec (previously known as Developing Nation Prosthetics) provides low cost, high functionality replacement limbs with an acceptable amount of customization for children in other nations.

(Photo: J.M. Wilson)

[Case: NonSpec](#)

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THE SUN

WEDNESDAY
June 10, 2015 Lowell, Massachusetts
\$1.00

Two floors, no ceiling on invention

UML business incubator opens in rehabbed canal district building

By Robert Mills
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LOWELL — Catherine Pujol-Baxley started on Tuesday about 9 a.m., the first scientist to work in the new research space at UMass Lowell's business incubator in the Hamilton Canal District.

The incubator is the first commercial property to open its doors in the Hamilton Canal District, a prominent part of the city at the edge of the downtown, long home to little but abandoned buildings and vacant lots. It makes its home on the top floor of the former Freudenberg Non-wovens mill at 110 Canal St.

Pujol-Baxley is director of research and development for KnipBio, a start-up that is engineering micro-organisms to improve the quality of food used in aquaculture, also known as fish farming.

UMass Lowell leases the top



A PLACE TO EXPLORE: Erin Keaney, co-founder and CEO of Nonspec, and Brendan Donoghue, right, a 2015 UML graduate who is an intern at Nonspec, show a prosthetic foot to UMass President Emeritus Jack Wilson at UML's new incubator at 110 Canal St. Below, from left, Steve O'Riorden, UML associate vice chairman for financial services, UML Government Relations Associate Colleen Brady and Director of University Events Rick Sherburne take in the view.

SUN PHOTOS / JULIA MALAKE



two floors of the building, with 11,000 square feet of space on each floor meant to help grow start-ups in the biotech and medical-device fields.

The facility is home to two separate but related programs — the UMass Lowell Innovation Hub, on the fourth floor, and an extension of the university's Massachusetts Medical Device Development Center.

Please see **INCUBATOR/10**