

# THREE-BY-THREE ECONOMIC INTEGRATION MODEL

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## I. INTRODUCTION

There are three distinct economic entities within a nation: individual, organization and the nation itself. In those instances when there is a combination of individual and organization, the acronym "IO" will be employed. Simplistically, an organization can be defined as a group of individuals who work together to achieve common goals. Individuals can produce goods and services directly by becoming single proprietors, or indirectly by participating in the production processes of an organization. Due to specialization and division of labor among the participating individuals, the quantity of goods and services produced by a well-organized cohesive organization is much higher than an equal-size group of disjoint individuals. The quantity of goods and services produced by a nation depends upon the abilities of its IOs, their interactions with each other, and the effectiveness of the integration of their economic activities. The relationships between individuals, organizations and the nation can be represented as the "economic entity model" or EEM.

The input-conversion or production process is very similar across the three entities, and it has three components: input, potential and realization of potential (result or output). Each entity possesses an economic potential that is derived from a set of unique input factors. The degree of economic success depends on how greatly the potential is being realized. At the individual level, the degree of realization is determined by how well the individual is employed and compensated. At the organization level, the realization is reflected by the size of the profit earned and by the organization's long-term survival ability. At the national level, the realization is reflected by a strong economy with good broad economic indices such as

per-capita GDP, inflation, employment, worker productivity and international trade balance. The better the indices the better the realization. The relationships between input, potential and realization of potential can be represented as the "potential realization model" or PRM.

To fully understand how IOs and nations maximize their economic performance, it is necessary to integrate the EEM and PRM. Because each model has three dimensions, their integration gives rise to a three-by-three (3x3) Economic Integration Model. This paper explains the relevant input factors, the derived potential, and the realization of potential at each entity, as well as the significant influences of one entity upon the other two.

## II. THE 3X3 MODEL

### 1. Individual

a. Input: Input factors that directly affect the potential of an individual are heredity and family support. The better the genes, the stronger the personality (or individuality) and the stronger the family support, the more capable the individual. The major indirect input factors are the cultural, political and economic environment to which the individual belongs. For example, some cultures and governments place heavy emphasis on education, and consequently people of such societies are more willing to invest in education. Or, people of wealthy countries with abundant educational institutions have more opportunity to obtain good education and marketable skills.

b. Potential: There are two types of potential: job-related and leadership-related. Job-related potential provides the individual with the ability to perform a job efficiently and consists of relevant technical skills, creativity, work ethics, self-

esteem, good health and mental strength. "Relevancy" is a very subjective concept; it implies that the skills must be compatible with the short-term and long-term needs of the economy. For example, in an agricultural economy, relevant technical skills may include operating tractors, planting seed, understanding weather patterns, and mastering harvesting techniques.

Leadership-related potential provides the individual the ability to lead and manage organizations such as:

- Organize disjoint individuals into a productive organization.
- Lead an organization in dealing with other domestic and foreign IOs in a productive, peaceful, ethical and honest fashion.
- Clearly define obtainable goals and objectives and communicate them to the members.
- Understand the needs of the members and tie them to the organization's goals and objectives.
- Improve the cohesion and the productivity of an organization.

Policy makers of a nation should constantly evaluate the portfolio of individual-based potentials to see if they are adequate in supporting the short-term and long-term needs of their economy. Ideally, 95+ % of those who want to work must have the relevant job related and/or leadership related skills needed by the economy. The 95% threshold is the norm that occurs in the USA. Further, the ratio of job - related and leadership - related skills must also be compatible with the needs of the economy.

c. Realization of potential: The utmost important sign of realization of an individual's potential is being gainfully employed, and either compensated generously in financial terms or having a significant impact on the daily lives of many others. The highest level of realization can occur in four different ways:





- The individual becomes a successful entrepreneur who can develop organizations that bring new/existing products or services to the market place to serve hundreds, thousands or hundreds of thousands of customers.

- The individual becomes a leading expert with vast knowledge in an economically significant profession/discipline.

- The individual becomes a civic/political leader who has positive influence on many citizens or who helps develop/maintain a positive culture for strong economic development.

The second level is that of highly trained specialist such as doctor, lawyer, engineer or accountant whose education and training may take decades to complete, and who occupies a key and stable position in a large organization, i.e., an organization with national and/or global significance. The third level is that of moderately trained workers whose training and education may take years to complete. The last is that of laborer or peasant whose jobs do not require advanced education.

The broad measure of the realization of the potentials of all individuals in a nation is the national rate of unemployment. In wealthy industrialized countries, a range of 3%-5% is considered the best realization rate. This range has taken into consideration both frictional and cyclical unemployment. Frictional unemployment occurs when people with relevant skills do not know where the jobs are. Cyclical unemployment occurs during general downturns in business activity. A long-term unemployment rate beyond 3%-5% indicates structural unemployment, a phenomenon in which individuals collectively lack the relevant skills required by the economy.

Because the success of individuals depends heavily on whether they can become successful entrepreneurs (natural economic leaders) or leaders of organizations with national/global significance or leaders of significant professions, their chances of success rest with their nation's ability to train new leaders and provide them a rich environment in which to operate. This environment facilitates the establishment of new productive organizations and/or contains numerous large organizations or significant professions for them to serve as leaders. If a nation fails or is not willing to create such an environment, it indirectly denies its citizens the oppor-



tunities to become economically successful individuals.

## 2. Organization

a. Input: The input factors that directly impact the potential of an organization are the number of participating individuals and the utilized tools and equipment. The indirect input factors include form of business ownership, decision-making method, accountability or motivational or reward system, and the underlying cultural, political and economic environment.

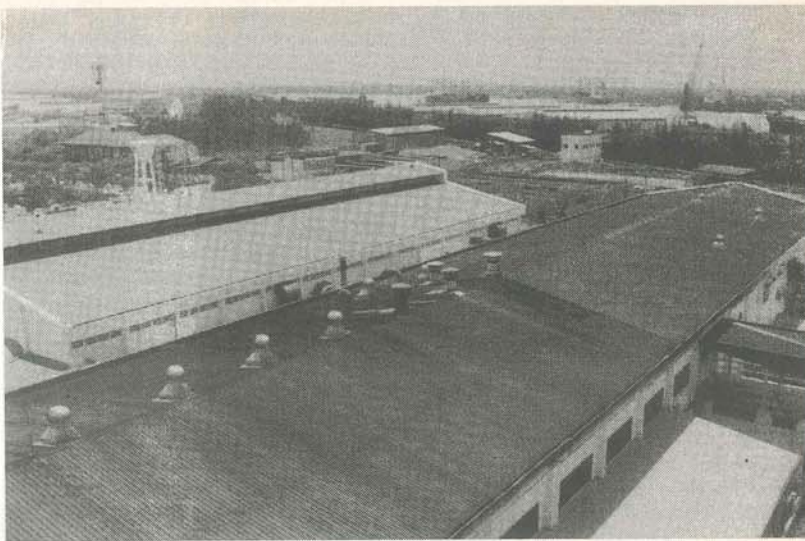
The more individuals, tools and equipment are utilized in the production processes of an organization, the higher the potential of the organization will be. When there are enough individuals with leadership skills, the organization will flourish. As described earlier, a good leader will:

- Organize disjoint individuals into a productive organization.
- Lead an organization in dealing with other domestic and foreign IOs in a productive, peaceful, ethical and honest fashion.
- Clearly define obtainable goals and objectives and communicate them to the members.
- Understand the needs of the members and integrate them into the organization's goals and objectives.
- Improve the cohesion and the productivity of an organization.

Organizations with the private form of ownership (private enterprises) detect new business opportunities faster than do those with the public form of ownership (state enterprises). When profit is the major measure of economic success, private ownership normally does better than does public ownership.

Organizations using a decentralized decision-making method react faster to changing business events than those with centralized decision-making. Organizational behavior research of the past 50 years has repeatedly confirmed that organizations will have the best performance if they delegate decision making to people who are close to the customers and the actual business events. These people can make good decisions in a timely fashion because they have an intimate knowledge of the customers and the business events that take place.

A good reward or accountability system certainly motivates/monitors individual members who in turn do their best to serve the organization. People will perform better when they receive positive rewards (bonus,



stock option, praise) for their significant economic contributions. Next, people are much more serious about their work when they are identified with the success or failure of the economic event under their control.

Positive cultural factors are honesty, civility, teamwork, independent thinking, respect for authority, and optimism. The presence of these factors helps integrate individuals into an organization and enhance the cohesion of the organization. Both can improve the organization's productivity.

Some economic systems such as market economy, may offer more financial rewards to economically vibrant organizations than do others, such as a socialist system. Some political systems such as multi-party, allow the formation of profit-seeking organizations more quickly than do those such as the single-party systems.

b. Potential: The first sign of the potential of an organization is the ability to understand the needs of its customers (profit-seeking organizations) or recipients of free/subsidized goods and services (non-profit organizations). The deeper the understanding, the better the potential. The second sign of potential is an exhibition of long-term competency in producing the products or services desired by customers/recipients. This requires the existence of core personnel, processes, policies, procedures, and management to maintain or strengthen competency. The third sign consists of cohesion and goal congruence among its individual members, a keen understanding of the external environment (competi-

tors, suppliers, laws and regulations), the ability to adapt, and strong organizational ethics. While the first two signs deal with satisfying customer needs, the third deals with the organization's possession of skills to survive or grow in the long run.

In a market economy, customers are the ultimate decision-makers who determine which organizations can grow and prosper. In the national/global economy, it is a major challenge for organizations to understand the changing needs of customers, and organizations with this ability are handsomely rewarded. For example, Nike understands the changing needs of global footwear customers very well. This ability has made Nike the leader of the footwear industry even though Nike does not directly produce shoes.

Long-term competency in producing goods and services is a moving target. At the minimum, organizations must ascertain the existence of core personnel, processes, policies, procedures, and management to maintain or strengthen the competency. ISO-9000 certification is a worldwide process that formally ascertains this existence. Organizations in the commodity business further need to become the most efficient or the cheapest producers. In this process, they must be in a constant search of new production techniques or processes or locations that can mass-produce high-quality goods and services at the lowest possible cost. For example, the number of national and global automobile makers has declined steadily during the past decades and the surviving



automobile makers constantly use new production techniques and locations that lower the cost of automobile production. For organizations that are in the high-tech business, the quick obsolescence of their products has forced them to constantly search for the next "hit" or "hot" products. They must hire the best brains, constantly retrain their employees, invest heavily in research development activities to develop an array of new products, test the market to see which new products customers desire, and build distribution channels to launch the products. All of these are very expensive and risky endeavors.

In addition to understanding customers and production processes, a

U.S. government, investors, stockholders and employees.

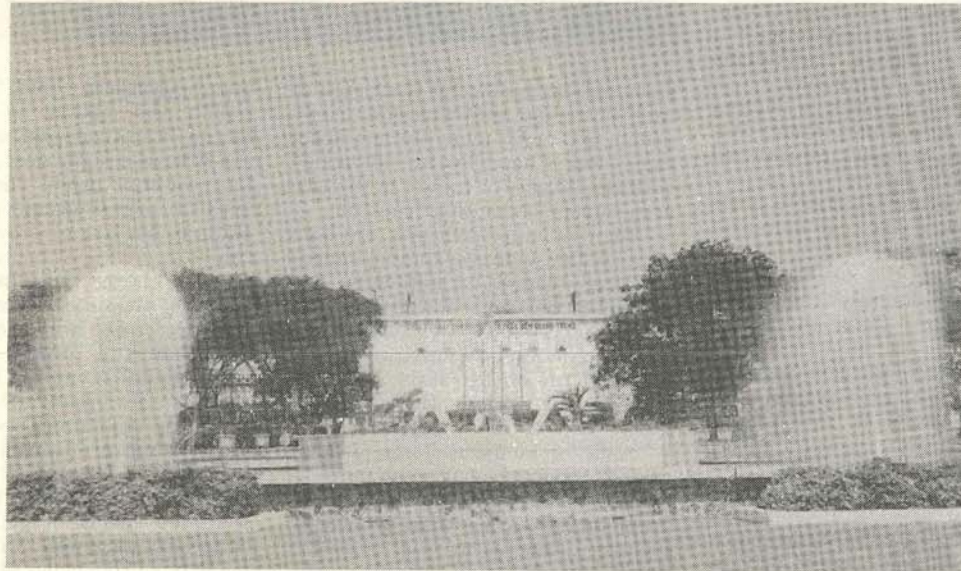
c. Realization of potential: The utmost important sign of realization for profit-seeking organizations is the size of the profit from operations, and for non-profit organizations it is the amount of goods and services provided to recipients. The next sign of realization is the long-term survival and/or growth of the organization.

Profit is simply defined as revenues minus expenses. The profit of a small organization is easily computed. But it is very difficult to compute for large organizations that produce/sell many products and services in numerous locations/countries, and have many subsidiaries with numerous inter-company activities. A fair

part of Enron's, WorldCom's and Andersen's management in misapplying or disregarding GAAP in the determination of profits helped cause the sudden collapses of these once-most-powerful global organizations.

The long-term survival/growth of an organization is reflected by its level of national and/or global significance or its industry rankings. An organization can be ranked on a number of dimensions:

- the size of its total revenue relative to others in the same industry
- the size of its total revenue that exceeds an important monetary threshold, e.g. US\$ 1 million, 100 million, 1 billion, 10 billion, 100 billion



strong organization must be a highly cohesive one in which the organization's goals and the needs of its members are congruent. Next, the organization must know how to fit into its environment by understanding its surroundings such as suppliers, competitors, governments, societies and cultures, so that it can adapt when necessary. Finally, strong business ethics is very important in winning the trust of investors, governments and society. Enron, Worldcom and Arthur Andersen were once, respectively, the seventh largest industrial company, the second largest telecommunications company, and the largest accounting firm in the USA. Their sudden collapses in 2001-2002 were caused by a lack of business ethics on the part of top management, and in creating materially misstated financial statements to mislead the

and accurate determination of profits of a large organization hinges on many factors such as:

- Ethical behaviors on the part of its leaders and accountants.
- Transparent corporate governance process or a process with adequate checks and balances.
- Adequate governmental and professional regulations of financial reporting standards including consistency in application of generally accepted accounting principles (GAAP).
- Avoidance of conflict of interests on the part of management, external auditors and government regulators.
- Competency and ethical behaviors on the part of their external auditors.

The absence of one of these elements may make the reported derived profit less trustworthy. Again, the lack of ethical behavior on the

- the size of the customer base relative to others in the same industry

- the size of its workforce that exceeds an important milestone, e.g. 1,000; 5,000; 10,000; 100,000 employees

Strong organizations are those that are large and powerful enough to make adequate profits in light of relentless competition from the national/global marketplace. To be or to remain strong, they must have competent, devoted leaders and employees. Collectively, leaders and employees must know how to satisfy customers and other external constituents with consistently high-quality products and services (produced at low cost) and with ethical behavior. The results are high profits and good chances of long-term survival.



Due to specialization and division of labor among the participating individuals, the quantity of goods and services produced by a well-organized cohesive organization is much higher than an equal-size group of disjoint individuals. Prosperous nations are those with many large and profitable organizations. Consequently, nations must do their best to provide a nurturing environment for the formation of new productive organizations and for the growth and maturity of existing ones. This realization is very important to the success of individuals because successful organizations provide individuals with significant employment opportunities.

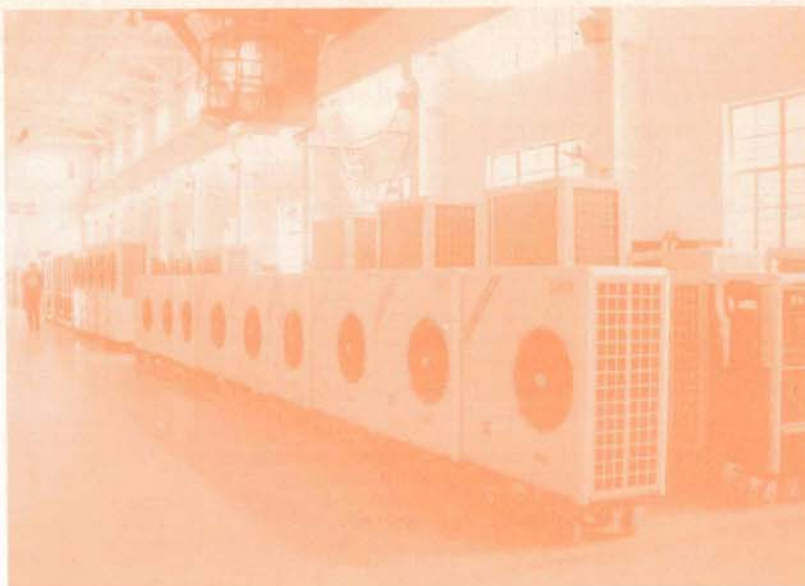
### 3. Nation

a. Input: The input factors that directly impact the potential of a nation include the number of IOs and natural resources available. The larger the number, the greater the potential of a nation becomes. The indirect input factors are: the underlying economic and political systems, including their strengths and weaknesses; governmental transparency, domestic political stability, international relations (threats, friendships, political and economic alliances), history and culture.

Some political and economic systems are more open to the formation of new profit-seeking organizations than are others. Organizations flourish within nations with high governmental transparency. Political stability is very important to organizations when making long-term investment decisions. Further, good international relations can bring many benefits to the nation such as:

- Opening new lucrative foreign markets to domestic IOs.
- Reducing adversarial atmosphere and tensions between nations; therefore, a nation could spend fewer resources on national security.
- Receiving substantial direct foreign investment and/or foreign aid (for developing countries).

History may bind nations together or split them apart. Historically bound countries such as the United States and the United Kingdom trust each other a great deal and have open trade with each other. Historically adversarial countries such as India and Pakistan trade bullets with each other more than goods and services. Wars and threats of war drain resources away from economic development.



Positive cultural factors are self-help, entrepreneurship, honesty, civility, fairness, teamwork, independent thinking, excellence, innovation, healthy living, environmental awareness and protection, and optimism. The presence of these positive cultural factors constantly reinvigorates IOs and promotes efficient business relationships. Nations need to do their best to steadily incorporate these positive cultural factors in the daily lives of their IOs.

b. Potential: The potential of a nation is derived from the collective potential of all IOs, direct foreign investment, military and security spending, the effectiveness of its legal, economic, financial and technological infrastructures; the effectiveness of fiscal and monetary policies, and access to lucrative international markets.

The collective potential of IOs includes the collective potential of individuals and that of all organizations. Thus, the larger the number of highly capable IOs, the greater the collective potential. Because the productivity of cohesive organizations is much higher than that of groups of disjoint individuals, a nation's potential is much greater when it has a large number of cohesive organizations.

Foreign investment brings in new ideas, management techniques, resources and/or technology to enrich a nation. Consequently, the recipient nation becomes economically more capable and all nations-including very wealthy nations-love to receive direct foreign investment. In 2000, the USA received a total of 1.21 trillion dollars worth of direct foreign

investment. This amount is larger the GNP of China for 2000, which was 1.06 trillion dollars.

High military and security expenditures generally have a negative impact on the economy unless they provide political stability or encourage technological innovation that benefits both public and private sectors in the long run. Countries that do not have to incur huge defense expenditures can devote more resources to economic development, and countries that make huge defense expenditures on high-tech weapons systems can also enhance their technology-based civilian economy. For example, the stationing of U.S. troops in Japan and South Korea has relieved these two nations from the excessive burden of high security expenditures. Consequently, they have been able to devote more resources to economic development. High-tech military expenditures in the U.S. and Israel have spawned a host of new technologies (computer, telecommunications, laser, etc.) that help their civilian electronic sectors become more competitive.

The legal infrastructure includes tax and business laws, law making, law enforcement, the court system, and government regulations such as anti-trust, environmental and financial reporting. The strength of the legal infrastructure comes from the independence of each legal entity from others, from the transparency of the entire structure, and from the consistent and pervasive application of rule of law. A strong legal infrastructure facilitates the generation of new organizations and clearly defines how



	Input	Potential	Realization of Potential
Individual	1) Direct: Heredity, family support 2) Indirect: Cultural, political, economic environment	1) Job-related 2) Leadership-related	1) Gainful employment with generous financial compensation or with positive influence on many citizens 2) Low unemployment rate
Organization	1) Direct: Individual members and their potentials, tools, equipment 2) Indirect: Form of business ownership, accountability system, decision-making method, motivational or reward system, underlying cultural, political, economic environment	1) Understanding needs of customers/recipients 2) Competency in core business 3) Possession of long-term survival skills	1) Size of profits for profit-seeking entities or quantity of goods and services provided to recipients for non-profit entities 2) Becoming nationally and/or globally significant
Nation	1) Direct: Individuals and organizations (los), natural resources 2) Indirect: Underlying political and economic systems, governmental transparency, domestic political stability, international relations, history, culture	1) Potentials of los 2) Direct foreign investment, military and security spending 3) Effectiveness of legal, economic, financial and technological infrastructures 4) Effectiveness of fiscal and monetary policies 5) Access to lucrative international markets	1) Strong economy with encouraging statistics on per-capita GDP, inflation, unemployment, worker productivity, international trade 2) Engagement in high value-added industries or industry segments 3) Safe and fair/equitable society 4) Home of talented individuals, headquarters of global firms and world-class events.

IOs should conduct themselves in the course of business.

The economic/financial infrastructure includes utilities (electricity, water, water treatment, and telephone), basic and professional education, health and fitness, transportation (air, water, land), credit rating, banking, and stock market and/or investment sector. A strong economic/financial structure provides a stable business environment for IOs and enables them to grow quickly.

A strong technological infrastructure helps IOs become more efficient and/or innovative. The technological structure consists of institutions that can create or help create new suitable technology, assist IOs to apply technology in economic activities and daily lives, and disseminate new relevant technology to the general population.

IOs can only produce more goods and services when there is a demand (domestic and/or international) for them. Good fiscal and monetary policies are needed to balance the aggregate demand and supply as well as provide domestic price stability. Access to lucrative international markets further increases the aggregate demand for domestically produced goods and services, and consequently enables IOs to produce more. Thus, it is the responsibility of the government to develop highly effective fiscal and monetary policies as well as friendly relations with wealthy nations to open lucrative international

markets to IOs. These efforts will increase the nation's potential.

c. Realization of potential: The realization of potential at the national level consists of a number of indicators: a strong economy with sustained long-term economic growth, steady progress in moving toward lucrative industries or industry segments, being a home of world-class entities, and being a fair, safe, equitable and happy society.

A strong economy is one that generates numerous encouraging statistics on per-capita GDP, inflation, unemployment, worker productivity and international trade balance. Sustained long-term economic growth is confirmed by high rates of business formation, expansion and maturity. Business formation relates the nation's ability to create new businesses and industries to replace old and/or inefficient ones. A nation with high business formation statistics is good for individuals as well because it confirms the success of entrepreneurs in establishing new businesses. Business expansion relates to the nation's ability to enlarge existing factories and businesses to serve more customers and new markets. Business maturity relates to whether the business sector has reached important maturity thresholds to compete nationally and globally. The business maturity rates show the long-term survival ability of organizations. The bigger or more profitable organizations are, the better the long-term survival chances are.

A wealthy nation is one that engages in many high value-added industries or high value-added segments of an industry. The nation should display consistent, steady progress toward moving out of less lucrative industries and into high value-added industries, or moving out of less lucrative industry segments and into highly lucrative industry segments. High value-added industries include finance/banking, information processing, mass production manufacturing, precision manufacturing and corporate farming. Less lucrative industries include light manufacturing and non-corporate farming. High value-added industry segments are those that utilize much high-skilled labor, process information, or require a great deal of capital investment. Less lucrative industry segments are those that utilize much low skilled labor or process raw materials. For example, Nike possesses the high value-added segments of the footwear industry such as design, marketing and distribution, while developing nations possess the low value-added segments such as shoe making and packaging. High value-added industries and industry segments provide high-paying jobs for individuals.

Next, high economic growth can only be sustained in the long run when the nation becomes or remains a safe and fair/equitable society. Otherwise, unexpected social and/or political catastrophes could destroy the nation and its hard-earned economic





progress. From the safety perspective, economic progress must not cause significant air, water and noise pollution; destruction of rare plant and wildlife habitats; outbreaks of difficult-to-treat diseases or soil erosion. From a fairness/equity perspective, economic progress must also be accompanied by the practice of equal-opportunity employment, a practice in which good jobs are given to candidates because of their relevant skills, not for their connection to a powerful political, religious, racial or ethnic group. Further, job-retraining and job-placement-assistance programs must also be created for members of chronically disadvantaged groups to help them become economically self-sufficient.

The last important sign is that the nation becomes a home of talented individuals, headquarters of global firms, and globally significant events. Talented individuals and headquarters of global firms normally choose as their countries of residence, those that are known for their political stability, fair/equitable society, peaceful international relations, transparent and legitimate government, high-quality infrastructures, highly-educated work force, availability of good entertainment and recreation facilities, and accessible beautiful scenery (both natural and man-made). Currently, these countries are the United States, Japan, Germany, United Kingdom, France, Canada, Australia and South Korea. Similarly, globally significant events such as the Olympics, the World Cup and annual WTO meetings are only held in countries with strong infrastructures. Thus, the

presence of these world-class entities attests to the effectiveness of the infrastructures and the fairness of a nation; and consequently enhances economic development efforts.

### III. CONCLUDING REMARKS

The 3x3 Economic Integration Model can be summarized using a matrix.

The 3x3 Economic Integration Model provides simple guidelines to IOs and nations on what to do in order to succeed economically and how to recognize success for each entity. At the individual level, individuals succeed in an environment in which they can become successful entrepreneurs, or occupy key stable positions in big organizations with national or global significance, or become leaders of important professions/disciplines. Thus, nations must strive to do their best to home-grow new businesses and invite global organizations to come to their countries to provide success opportunities for their people.

At the organization level, organizations succeed when they understand their customers/recipients and external environment, and become very competent at what they do so that they can generate high profits (or, as non-profits serve many recipients) and become nationally or globally significant. Organizations must understand the needs of customers/recipients and be the most competent producers so that they can become profitable and nationally/globally significant. Nationally/globally successful organizations will further provide success opportunities to individuals.

At the national level, nations succeed when they have a strong economy, one that specializes in high value-added industries and/or industry segments. The high value-added economy can only be possible when the nation has competent and profitable organizations with national or global significance; highly effective legal, economic, financial and technological infrastructures; highly effective fiscal and monetary policies, and access to lucrative international markets. Nations must strive to build and maintain highly effective infrastructures and fiscal/monetary policies, encourage their IOs to enter high value-added industries and industry segments, and attract world-class entities. Economic progress must also be balanced with being a safe and fair/equitable society. Such efforts will be rewarded with high per-capita GDP, low inflation and unemployment, high worker productivity and favorable international trade balances. All of these mean "a good life" for many citizens and "a strong nation" for all.■

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