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Anatomy of a financial center's global competitiveness in the context of Michael Porter's model of national competitive advantage a theoretical analysis

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ANATOMY OF A FINANCIAL CENTER'S GLOBAL COMPETITIVENESS IN
THE CONTEXT OF MICHAEL PORTER'S MODEL OF NATIONAL
COMPETITIVE ADVANTAGE: A THEORETICAL ANALYSIS

by

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A thesis submitted in partial fulfillment of the requirements
for the Honors in the Major Program in Finance
in the College of Business Administration
in The Burnett Honors College
at the University of Central Florida,
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Thesis Chair: Dr. Richard Ajayi

ABSTRACT

Throughout history, a number of financial centers have risen and fallen. While the significance of some centers have deteriorated, a small number of centers have emerged as today's leading financial centers by meeting a specific set of necessary conditions needed to successfully address the growing financial needs of the regions they are located. Furthermore, an even smaller number of financial centers have been able to sustain and expand their initial dominance in the financial industry by continuously satisfying a more focused set of conditions and factors. This thesis focuses on adapting Michael Porter's Diamond Model in determining, clustering, and expanding key factors that have historically given cities such as London, New York, Hong Kong, Singapore, and Tokyo their current status at the pinnacle of the financial centers of the world.

This thesis begins by taking Porter's model that addresses national competitive advantage nations from a macroeconomic point of view, and adapting it to the development of financial centers at a microeconomic level. It utilizes Michael Porter's established grouping corners for identifying a vast array of macroeconomic and microeconomic factors that have historically played critical roles in increasing productivity and efficiency within a center's financial industry. Additionally, this thesis categorizes these factors into parameters that form a theoretical model designed to showcase the path to global financial dominance for an aspiring financial center.

With the adaptation of Porter's model outlined in this thesis, financial centers are given a figurative blueprint of what constitutes a successful financial center. The theoretical model analyzes the necessary conditions and environments that a center needs to recreate within itself, or are endowed with, in order to be a globally competitive financial center.

DEDICATION

For the leaders and movers of my generation, in all the fields and disciplines of life,

For my mentor, Dr. Richard Ajayi, for pushing me to pursue excellence beyond the standards I
have set for myself,

And especially, for my parents, Joel and Jennifer Magpantay, for instilling in me that all things
are possible through Him that strengthens me.

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CHAPTER 1: INTRODUCTION

The status and prominence of the top global financial centers of today are neither accidental nor inherited but rather a result of a deliberate and sustained pursuit of excellence. Historically, as centers played host to high volumes of domestic and regional trading activities and served as focal points in their regions, they were forced to evolve into the earliest forms of financial centers. By doing so, the centers were able to better accommodate and spark an increase in the amount of economic activities anchored around them. The commercial centers that remained stagnant, or were not able to make this transition, were lost in the background while the importance of the centers that transitioned successfully grew exponentially.

Centers such as London, New York, Hong Kong, and Singapore have all traveled distinct journeys that have transformed them from being local centers of commerce and finance, to serving at regional levels, and finally to global financial dominance. The preeminence of these centers resulted from a sustained supply of resources into developing their respective financial industries. A dynamic and innovative domestic environment enabled these financial centers to continuously evolve and adapt to the changing needs of the markets that they served.

The fundamental structures of today's top financial centers present a comprehensive view of the various dimensions of a financial center that hold the key to its path to the apex of the global financial center hierarchy. This knowledge can also be embodied in a model that showcases these dimensions and their individual significance to the evolution of global financial center. This model will display a financial center's core anatomy and highlight how its various elements such as inherent location, legal and judicial infrastructure, technological and communication infrastructure, and private and public infrastructure all play vital roles in a

center's progression to financial prominence. The model will capture the theories behind a center's various important elements such as overall quality of life, the strength of marketplace, quality of human capital, and general business environment that are critical to achieving dominance as a financial center.

CHAPTER 2: BACKGROUND

In each of their distinct histories, London, New York, Hong Kong, and Singapore were able to weather through unique crises and problems to become prominent global financial centers. However, history has proven that meeting some initial conditions was not enough to sustain a competitive advantage as the global structure and mechanics of financial and commercial markets evolved and matured.

A close examination of London's historic rise to prominence as a center of trade in Europe, the emergence of New York as the pinnacle of financial markets in the United States, and the rise of Hong Kong and Singapore to prominence in the Asian region reveals a set of enabling factors that is fundamentally common to the advancements of these dominant centers. Though this set of factors may have manifested parts of itself through different avenues or achieved at different times, its fulfillment was necessary in transitioning these centers from local and regional financial centers into global financial centers.

In *The Competitive Advantage of Nations*, Michael Porter (1990) emphasizes that a nation's ability to innovate and upgrade its environment to better create and assimilate knowledge is critical in fostering local and national competitiveness. In his study, Porter states that change becomes an unnatural act in companies that identify their successes solely with the standard practices that brought them their initial success. He asserts that as these companies systematized and standardized the various operating procedures associated with these past successes, they hampered the innovative outlook needed to meet the consumer's evolving needs (Porter, 1990). From a macroeconomic standpoint, national prosperity is developed and rarely chanced upon. In essence, a nation's ability to increase its overall productivity and strengthen

competitive advantage is only maximized through continued innovation and upgrades of factors associated with its national and inherent values as well as physical structures and economic institutions.

Porter stated that the first step to achieving competitive advantage is creating an environment that enables a nation to recognize the initial demand of its marketplace. An increase in overall industry productivity will result as companies within that nation exhibit a higher efficiency in recognizing a demand and satisfying that demand. As the demand grows, sustaining and strengthening the initial competitive advantage are dependent on constant innovation and upgrades enacted onto the conditions and infrastructures supporting how the initial demand is met. Since competitive advantage must first be created, or endowed, before it can be sustained, each step in the process is essential to the system as a whole.

To help explain the process of how national competitive advantage is achieved, Porter developed the Diamond Model. In the model, the diamond's four corners of Factor Conditions, Demand Conditions, Related and Supporting Industries, and Firm Strategy, Structure, and Rivalry are detailed. The corners of Factor Conditions and Demand Conditions encompass the phase where the conditions needed to create, cultivate, and recognize demand are outlined. Related and Supporting Industries and Firm Strategy, Structure, and Rivalry constitute the phase where the factors that strengthen and extend competitive advantage are outlined. Though each pillar stands partially independent, the cohesiveness of all the factors within the pillars is critical to the success of the Diamond Model (Porter, 1990).

The model proposed in this paper seeks to shed a light on what has facilitated the rise of the top global financial centers and to help better understand the fundamental structure of a

competitive global financial center. As the financial environment of the world continues to evolve, a better understanding of the fundamental elements that constitute a financial center's core structure will be critical to any center's ability to adapt and innovate.

Specifically, this thesis will present a theoretical anatomy of a global financial center featuring the inherent factors that have played a historical importance (such as a center's innate natural resources) while highlighting the modern factors (such as a center's ability to integrate itself into the global communication network).

CHAPTER 3: LITERATURE REVIEW

In 2003, David Lascelles was commissioned by the City of London Corporation to write *Sizing up the City – London’s Ranking as a Financial Centre*, a report intended to open up discussion about future developments in the international financial field. This report explored perceptions of financial service professionals on London’s competitiveness as compared to the top financial centers of that time. An index of competitiveness was created through responses to questionnaires and interviews from over 350 institutions such as banks, fund managers, insurers, technology providers, professional firms, trade associations and public officials. This index was then used to rate London’s performance against New York, Paris, and Frankfurt. In this index, a city’s performance is rated in six areas: pool of skilled labor, competent regulator, favorable tax regime, government responsiveness to concerns of the financial sector, a light regulatory touch, and an attractive living environment (Lascelles, 2003).

The report generated much attention because it identified key components of competitive advantage in the international financial services industry through interviews and observations of senior decision makers in the financial field and then used this knowledge to rank London’s performance against its closest rivals.

In 2005, Mark Yeandle, Michael Mainelli, and Adrian Berendt of Z/Yen Limited were commissioned by the City of London Corporation to create the *Competitive Position of London as a Financial Centre* as a follow up study to Lascelles’ 2003 report. From this study, the six areas of performance that were studied in Lascelle’s report were expanded to the 13 areas. The areas are: availability of skilled personnel, regulatory environment, access to international

financial markets, availability of business infrastructure, access to customers, fair and just business environment, government responsiveness, corporate tax regime, operational costs, access to suppliers of professional services, quality of life, culture and language, quality and availability of commercial property, and personal tax regime (Yeandle, Mainelli, & Berendt, 2005).

From this study, it was judged that the availability of skilled personnel and the regulatory environment were the most crucial components of a financial center. Respondents to the questionnaire from this study judged both components as either critically important or very important to a center's status.

In 2007, Z/Yen Limited was commissioned again by the City of London Corporation to create the *Global Financial Centres Index 1 (GFCI)* as an expansion of Yeandle, Mainelli and Berendt's 2005 report. It initially extended the study from four financial centers to a total of 42 major financial centers (Z/Yen Limited, 2007).

The GFCI uses a wider range of instrumental factors than Lascelles' report as it utilizes external indices such as Mercer's Quality of Living Survey, UBS's Wage Comparison Index, and Transparency International's Corruption Perceptions Index. Also, it seeks responses to two online surveys from professionals in the various global financial markets. Using the instrumental factors and the survey responses, a predictive model of financial center competitiveness is built and used to rank the major financial centers.

The index ranks the major financial centers around the world in five general areas of competitiveness: *people, business environment, market access, infrastructure, and general*

competitiveness. In the latest edition that was released in March of 2011, the GFCI 9 studied 75 major financial centers using 76 instrumental factors and responses from 1,970 financial service professionals (Z/Yen Limited, 2011).

In 2007, the Securities Industry and Financial Markets Association commissioned the creation of *The Key Building Blocks of World-Class Financial Centers*. This project identifies the key structural factors that lead to the creation of world-class financial centers. Though the study does not examine financial market infrastructures in an extensive manner, it highlights the institutional elements that are essential to all global financial centers (Securities Industry Association, 2007). It uses London, New York, Hong Kong, and Singapore as its models for world-class financial centers. The essential factors outlined in this report are open and fair financial markets, free flow of capital and a convertible currency, skilled workforce/flexible labor laws, prevalent use of a globally familiar language, fair, transparent, efficient legal and regulatory regime, sound and fair tax regime, implementation of international standards and best practices, low cost of doing, high quality, reliable and appropriate physical infrastructure, and a stable political and economic environment.

Introduced by Michael Porter and first published in the 1990 March-April issue of the Harvard Business Review, *The Competitive Advantage of Nations* focuses on how a home nation influences the ability of its industries to compete in the global marketplace. It examines the relative strength of individual industries and companies in relation to the national environment where these companies are located.

Porter studied ten important trading nations over a span of four years to determine how nations gain a competitive advantage in particular industries by increasing domestic productivity

and global competitiveness. He contends that the only true measures of competitiveness are increases in productivity and efficiency. To further help explain the process of how competitiveness at a national level is achieved, Porter introduced the Diamond Model of National Advantage.

In Porter's Diamond Model, the four corners of Factor Conditions, Demand Conditions, Related and Supporting Industries, and Firm Structure, Strategy, and Rivalry encompass the major determinants of national advantage. He further explains that the government's role in this system is to act as a catalyst and challenger. He states that governments cannot create competitive industries but only exist to amplify the underlying conditions in the diamond (Porter, 2008).

Though the studies done by the City of London Corporation and the Securities Industry and Financial Markets Association have identified various factors that make a financial center competitive, no study has ever produced a model that effectively combines factors that contribute to the initial strength of a financial center with the factors that contribute to the sustainability of this strength. Moreover, no study has ever applied a competitiveness model such as Porter's Diamond Model for analyzing the structure of a global financial center. Also, Porter's model has never been adapted for creating a roadmap to financial prominence for financial centers that utilizes qualitatively and quantitatively structured factors.

CHAPTER 4: PURPOSE

The paper recognizes the need for a theoretical model that would explain the complexities of a successful global financial center by showing its core structure. Although previous studies have outlined various factors of world-class financial centers, no study has utilized these factors and their intricacies into building a theoretical representation of a globally competitive financial center. By employing the enabling factors and components as building blocks for a comprehensive model this paper outlines a roadmap for creating successful financial centers. This model can also be used to help a center assess its performance in the key areas of growth that lead to dominance in the global financial market.

The paper highlights the literary gap that exists between the qualitative and quantitative evidence that support the importance of the enabling factors that define the structure of the current dominant financial centers. A comprehensive study that marries the qualitative aspects of the factors (based on a theoretical foundation) and quantitative aspects (based on perceived and surveyed importance) is still needed. Though this paper does not quantitatively qualify the model it outlines, it provides the necessary tools needed to establish the model's quantitative evidence.

The main purpose of this paper is to identify the set of enabling factors that have contributed to the emergence of the top global financial centers such as London, New York, Hong Kong, and Singapore and have allowed them to maintain and expand their initial importance as global centers of finance. Through the recognition of these factors, the fundamental structure and core anatomy of a global financial can be constructed.

This thesis adapts Michael Porter's Diamond Model of competitive advantage of nations to construct a model of competitive advantage of global financial centers. As Porter's model

deals with increasing productivity at a macroeconomic or national level, this thesis adapts the model at a microeconomic level of financial centers and focuses on the factors that increase productivity within a center's financial environment. This thesis explores interdependence of the factors, hierarchy of importance, and the theoretical significance of each factor in fostering global advantage of a financial center.

Finally, this thesis aims to develop a model that can be used as a workable framework of benchmarks that identifies a path to becoming a global financial center. Financial Centers can utilize this model in comprehending the necessary factors to increasing productivity in their financial industries that result in building a global competitive advantage. The model can also be used to develop a rating system for global financial centers by weighting the various factors against quantified factors determined by the Delphi method of survey.

CHAPTER 5: PROBLEM STATEMENTS

Problem: What are the factors that have propelled the world's top financial centers into the financial limelight?

The world's top global financial centers are separated from their peers by a set of key enabling factors. Though previous studies have outlined various groups of factors that are necessary to excel as a financial center, a comprehensive analysis that incorporates the factors associated with the initial demand conditions with complimentary factors that contributed to further advancement of a center to prominence has not been presented.

The thesis presents a comprehensive set of factors classified into two parts. The first part shows the antecedents to an economic environment that will foster domestic commercial growth and a need for financial intermediation. The second presents the conditions necessary to strengthen and sustain competitiveness as a financial center serving at a global level.

Problem: Is there a way of classifying these factors into clusters that can comprehensively show how the factors constitute the fundamental structure of a global financial center?

By presenting the clustering of the crucial factors, this project will show how these elements are intertwined, dependent, or independent of each other. The final framework will show a model of the elements that constitute a global financial center. The model will provide a pertinent representation of key points on the path to prominence of today's top global financial centers.

Problem: Can weights of importance and significance be assigned to the factors and be used to rate a center's global financial competitiveness relative to other centers? Can this

model be used by other aspiring financial centers as a blueprint for enhancing their positions on the path to globally competitive financial centers?

The factors highlighted in the model open up discussion for future research regarding quantitative qualification needed to show each factor's individual importance in determining a center's global competitiveness as a financial center. This concept of a creating a quantitative model that combines theoretical and empirical evidence in the image of Michael Porter's competitive advantage of nations is unprecedented. With such a model, an index can be constructed to rank major financial centers of the world relative to one another.

Such a model can be used by centers at any economic level in building and strengthening their positions as globally competitive centers of finance. The formulation of a quantitative model will transform the disparate factors that account for the financial strength of a center into a workable roadmap and checklist of prerequisites. While such a task is appealing, it is beyond the scope of this thesis.

CHAPTER 6: METHODOLOGY

Formulation of the Model

In formulating the model, we used reports by the City of London Corporation and Securities Industries and Financial Market Association to deduce a preliminary set of enabling factors. However, these factors did not cover all the fundamental aspects that contributed to an increase in financial productivity. As the factors only provided a limited purview of the areas of growth, it was necessary to dissect and to further expatiate each factor.

The preliminary set of factors needed to be assimilated into a model so that they could relate the independent significance of each factor while highlighting the importance of the factors' cohesiveness as system. In response to this, a framework adapted from Michael Porter's Diamond Model was used to define the parameters of competitiveness that would spark an increase in productivity. Though Porter's model focuses on increasing productivity in a macroeconomic level, his theory is readily transferrable to microeconomic sectors like the financial market industry.

In Porter's Diamond model, corners were used to define exclusivity among the factors. In this adaptation, the corners are renamed as parameters to show the complementary relationships that certain factors exhibited with one another. The parameters are also used as guidelines in enhancing the scope that each factor covered.

The Factor Endowments parameter defines the availability of inherent factors and the extent to which these factors are upgraded. These inherent factors are upgraded to better equip a center in creating the primary environment that fosters the need for financial intermediation. The

Demand Conditions exhibited the factors that impelled a center into efficiently recognizing and initially meeting the need for financial intermediation at a domestic level. Before a center can excel at a global level, it must first be efficient in serving the needs of its domestic market. The Related and Supporting Industries parameter defines the factors present in local non-financial industries that force growth and innovation in the financial industry. In theory, the strength of the financial industry within a center will grow as the complementary and supporting industries grow and strengthen. The Firm Structure, Strategy, and Rivalry parameter defines the factors that influence the structures of firms within a center's domestic financial industry and the environment that they compete in. Individually, each parameter is independently critical and serves its own unique purpose in strengthening a financial center. As a system, each parameter's significance is critical to the success of the model as a whole.

From a preliminary group of six factors, 19 factors that comprehensively demarcated the anatomy of a global financial center were established. The factors were fitted into their respective parameters of influence in the adaptation of the Diamond model to provide the substance and foundation the model being proposed. Each factor in this model is characterized by a series of indicators. This defines the necessary aspects a center must satisfy to maximize each factor's potential impact in achieving a competitive financial environment.

The Model Outline

A. Factor Endowments

1. Human Capital (3 Indicators)
2. Legal and Regulatory Infrastructure (3 Indicators)
3. Communication and IT Infrastructure (3 Indicators)
4. Quality of Life (3 Indicators)
5. Property and Public Transportation Infrastructure (3 Indicators)
6. Inherent Location Advantages (2 Indicators)

B. Demand Conditions

1. Domestic Economic Condition (3 Indicators)
2. Sources of Capital (2 Indicators)
3. Strong Domestic Customer Base (3 Indicators)
4. Dynamism of Local Marketplace and Participants (2 Indicators)

C. Related & Supporting Industries

1. Scope of Global Market Integration (3 Indicators)
2. Growth of Supporting Industries (3 Indicators)
3. Quality of Related Industries (4 Indicators)

D. Center Strategy, Structure, & Rivalry

1. General Business Environment (4 Indicators)
2. Capital Mobility (3 Indicators)
3. Market Openness to New Entrants (3 Indicators)
4. Regulatory Balance and Enforcement (3 Indicators)
5. Legal and Judicial Environment (3 Indicators)
6. Local Rivalry Among Firms (2 Indicators)

CHAPTER 7: THE THEORETICAL MODEL

Factor Endowments

Availability of acquired and natural skills and resources define what a nation will be capable of achieving

Human Capital

In the case study “*Differentiation in Financial Markets: The Human Capital Approach*”, Carol Royal and Loretta O’Donnell (2008) state the importance of human capital in knowledge intensive industries; “*Human Capital is a key intangible form of value creation, and one which traditionally has been definitively described... In these (knowledge intensive) sectors, investors place a great deal of trust in the “management quality” to deliver results, in the absence of traditional profit and revenue models.*”

This fact regarding the importance of Human Capital as the most critical ingredient in differentiating a financial center from its peers is further reinforced by survey results from Yeandle, Mainell, & Berendt (2005) regarding the competitive position of London as financial center. In this report, more than 90% of respondents viewed Availability of Skilled Personnel as very or critically important. Furthermore, they stated that a reoccurring explanation to London’s continued strength as a financial center was the high availability of high quality personnel in staffing the city’s financial firms. The authors concluded: “*More than 90% of respondents viewed availability of skilled personnel as Very or Critically Important... It is difficult to avoid the conclusion that London and New York score so highly as global financial centers because of the quality of the workforce.*”

Without doubt, for a center to be globally competitive, an abundance of skilled workers must be available to the firms within that center to provide financial intellect, knowledge capital and technological and communication support. Furthermore, availability of affordable and competent administrative personnel remains a factor to maintaining a center's competitive advantage.

Availability of Financially Skilled and Adept Personnel

Since the financial industry is a knowledge intensive industry, a high quality workforce that is adept in the use of financial instruments and implementation of strategies can be regarded as the most critical ingredient in gaining and sustaining a competitive advantage. If there is a shortage of capable financial professionals who are intellectually equipped in successfully and efficiently using the capital available to them, there will be a limited economic growth for that center.

However, if there is an abundance of the capable financial professionals, foreign and local investors will find it attractive to invest more capital in the financial center.

Availability of Capable Research, Analytical, and Technological Support Teams for Financial Personnel

In order for the financially skilled personnel to do their jobs efficiently, research, analytical, and quantitative teams are needed to provide them with reliable and efficient service. Without technologically adept workers, a center will lose competitiveness to centers that are able to utilize the catalyst nature of technology

in effecting quality results.

Similarly, a high availability of quality support teams will allow managers and advisors to make better and more informed decisions. Capable support teams that provide secure data and sound information to their managers at a quicker pace and lower costs will increase a center's economic standing while further strengthening its competitive advantage.

Affordability of Administrative Personnel

For financial firms to function smoothly and efficiently, an effective administrative staff will be required to coordinate back office functions and maintenance.

Legal and Regulatory Infrastructure

Foreign direct investments are important for a financial center to grow economically and establish a global presence. Historically, countries that have received minimal or no Foreign Direct Investments (FDI) from investors from the United States and other advanced economies are countries that have weak governance structures and legal systems that are not based on English common law (Globerman & Shapiro, 2003). Globerman and Shapiro further emphasized, "*A favorable governance infrastructure creates beneficial conditions for investment and economic growth*". Furthermore, because a country's investment environment impacts both domestic and foreign investors, FDI will be more attracted to a region characterized by more favorable and comprehensible governance infrastructure.

As a center's legal and regulatory infrastructures play vital roles in creating an enabling environment for economic progress, it is expected that foreign direct investments will be attracted to regions that foster favorable legal and regulatory infrastructures. Hence, investing in governance infrastructure should result in an increase in the flow of foreign investments into the center (Globerman & Shapiro, 2003).

So, before a center can be globally competitive, its legal environments must display a high degree of freedom for transacting business ventures. It must allow for foreign direct investments to grow freely and unhindered. Finally, the center must manifest a highly transparent, efficient, and corrupt-free legal process to ensure fairness among all market participants.

Low Government Interference on Business Transactions

To ensure that firms produce at the highest rate possible, there must be minimal pressures in conducting transactions and deals among firms, regulators, and investors. If a center provides a high degree of freedom for firms to maneuver with prospective clients and partners, the center will gain a reputation of having an enabling environment that is critical to the growth of any industry. Market makers and players must be allowed to focus on the growth of their businesses. Their transactions must be met with minimal "red tape" and bureaucratic inertia so that growth will not be hampered by government actions.

Reliable Implementation of Economic Growth-Conducive Policies

A center's government must be active in pursuing policies that continuously foster growth. There must be historical evidence that supports the capability and reliability of an administration to follow through on relevant policies that are critical to economic progress.

Policies must be implementable and realistic and not overly optimistic. Simple policies that can be implemented in a timely manner have a stronger effect in creating an enabling environment than highly complex policies that require tremendous amounts of time to implement.

High Transparency of Government and Legal Processes

In order for a center to retain the firms that have set up a presence within its borders, governmental and legal procedures must be transparent, understandable, and justifiable. They must be transparent to ensure trust among the industries and policy enforcers. They must be understandable to reduce any loss of information through translation. They must be easily justifiable so that protection for all parties can be easily provided and be readily available.

Communication and IT Infrastructure

Establishing high degrees of communication and information technology infrastructures in a center is critical in ensuring a sustained growth for that center. Historically, installing telecommunications networks have always led to an increase in economic development for countries adopting them. It has done so by decreasing

transaction costs for firms to communicate globally resulting in expansion to wider markets for domestic firms (Waverman, Meschi, & Fuss, 2005).

In modern times, a telecommunications network is not enough to keep a center globally connected and remain globally competitive. It must be globally integrated through high-speed Internet access and have access to knowledgeable users and implementers of globally competitive information technological systems. In doing so, all the firms within the center will be able to have access to technology that paves the way for high levels of communication domestically and internationally. As the world evolves, information technology will evolve with it. For a center to sustain its growth and strengthen its competitive advantage, it must be willing to continuously invest in staying ahead of its competitors' IT infrastructures.

According to a report commissioned by the city of New York, the City's ability to stay relevant with the evolution of information technology is a key factor to its sustained dominance as a global financial center. The report stated that as more and more global markets are making the switch to trading technologies and platforms that enable real-time interactions and transactions, failure to provide the infrastructure will result in a center to be overlooked as viable option as a source funds and capital (Bloomberg & Schumer, 2007).

Reliable Telecommunications System

A reliable telecommunications system is one of the most basic requirements to be globally connected. Without a reliable telecoms system, a firm's sphere of influence is greatly reduced thus negatively affecting its economic potential.

High Speed Internet Access

The next level of connectivity is Internet access. High-speed Internet access allows a center to be globally reachable at reduced costs. It paves the way for more economic growth at a significantly lower cost with a much higher output as larger amounts of data can be sent in less time.

Knowledgeable Use of Globally Competitive Information Technology (IT) Systems

A center that uses a competitive IT system has a technological advantage over a center that does not. For a center to achieve a competitive advantage through this avenue, it must have access to IT systems that can compete efficiently with similar technology that other financial centers have implemented. To sustain this advantage, a center must have personnel that can constantly maintain this IT system and implement upgrades as technology evolves.

Quality of Life

According to the 2008 report by the Securities Industry Association, quality of life has become a pivotal aspect in attracting quality international employees. The report stated that in the highly competitive global market for highly trained and qualified professionals, the importance of quality of life in attracting and retaining international employees has heightened (Securities Industry Association, 2008). A center that has a high quality of life rating provides reliable and modern infrastructures for electricity, water, air, and transportation as well as security and stability.

Furthermore, to sustain the ability to attract and retain skilled workforce and maintain high productivity levels, modern leisure activities must be made available within the center. Professionals must have access to activities that will stimulate their minds culturally and provide social circles for them to enjoy. An abundance of culturally enriching recreational amenities will provide workers with a dynamic off-work environment. By doing so, professionals will be able to assimilate themselves in a new environment at a quicker and more sustainable pace.

Similarly, the prevalent use of a globally familiar language is critical in assimilating new foreign entrants and strengthening a center's global marketability by providing a lingua franca for its workforce. Having a globally familiar language within a center will ensure easy communication between professionals from different cultures and eliminate language barriers.

Finally, in order to ensure that quality of life is kept high, there must be minimal social unrest and political instability. By keeping social instability at bay, country-specific risk decreases. This will increase a center's security and perceived safety for foreign investments and foreign entrants.

Prevalent Use of a Globally Familiar Language

In order for a center to be competitive, people within the center must be able to communicate in English, the globally accepted language of business. Aside from communicating externally, the use of a globally familiar language will help the assimilation process of expatriates in a new environment and eliminate language barriers from becoming an obstacle to doing business.

Socially and Culturally Enriching Recreational Activities

A high quality of life pertains to an abundance of readily available extra-curricular cultural activities. These activities range from accessibility of parks for recreation, museums and universities for cultural and academic enrichment, and a vibrant local atmosphere for social interaction. These are essential to maintaining a proper balance between a high-demand work and personal life in any knowledge-intensive industry. According to the Securities Industry Association report (2007), a workforce that maintains a balance between work life and personal life is more economically productive and enjoys a longer work life.

Political and Social Stability

A country that is politically stable and free from social unrest creates a free and lively social environment with little or relatively no country-specific political risks. This type of environment stimulates economic activity and creates a clear path for more economic and cultural growth. A stable government will ensure political continuity and safety for all citizens and non-citizens of the center.

Property and Public Transportation Infrastructure

One of the most basic and fundamental conditions that must be met before a center can be globally competitive is that its physical infrastructures are constantly updated and modernized. A center must be able to provide its citizens with world-class quality living spaces, modern and accessible network of roads and a readily available public transport system that connects the center locally, regionally, and internationally.

According to Xie Xiaoqing (2005) on the effects of investment on physical capital on the Chinese economic growth, before any external or internal investments into any other industry within a center can continue, there must be investments made towards improving the center's physical capital. However, once these investments are made, there will be a resulting growth in income per capita thus making improvement to physical capital a prerequisite for to any economic growth.

For a center to be competitive globally, improvements to a center's physical infrastructure have to be made. There have to be residential and office spaces that are readily available at reasonable costs to house the growing human capital and provide quality workspace for firms. Safe and reliable public transportation and quality road systems must be widely available to ensure that the professionals within a center can commute within the center's boundaries. International and interregional transport systems such as ports, airports, and train and bus stations must be readily accessible to ensure that a center is within reach of regional and foreign participants.

Availability and Cost of Quality Office and Residential Properties

An adequate amount of quality office space must be continuously available for firms to occupy. Residential property must also be continuously available to professionals. Residential properties must be within reasonable distance to the professionals' workplace to ensure that the quality of their work is not affected by travel time. Though cost plays a factor, its influence on professionals only extends up to a certain degree.

Good Quality Road System and Public Transport System

A good transportation system is one with high quality road systems and infrastructures. This is necessary to ease and hasten movement between locations in a center. An excellent local public transportation system is also essential in ensuring that any part of the center is accessible from all points. This ensures that citizens of a center will have multiple options of moving around the center's geographical limits.

Excellent International and Inter-Regional Transport Systems

A center must remain globally accessible through a combination of reliable and efficient ports, international and domestic airports, and train and bus stations. This is critical because it ensures that professionals can enter and exit a center through multiple transportation modes and not be limited to just one way in or out.

Inherent Location Advantages

Deemed as necessary but not sufficient, a center's inherent location adds a competitive advantage in its evolution as major center of commerce. Though becoming increasingly less important, location still plays a somewhat vital role in keeping a center connected to different parts of the world at all times of the day and night. It also enables a center to act as bridge between other centers with different time zones. .

Historical Rise as Centers of Trade

If a center is a historically important center of trade then its market infrastructure will have inherent advantages due to its historical familiarity with other centers of

trade. Its strategic location will provide a more competitive environment to firms due to an inherently high business and social traffic associated with historically important centers of commerce.

Overlapping Workday with Major World Markets

A center's workday that strategically overlaps with other major market workdays plays a factor in competitiveness because it provides real time access to more open markets and exchanges. It provides a center with the opportunity to continuously trade with different parts of the world at different times of the day and night. This location advantage also enables a center to act as a bridge between multiple markets that are on opposite ends of the time zone spectrum.

Demand Conditions

General market forces that affect the domestic marketplace and push for the emergence of financial firms within a dynamic local commercial center that pave the way for growth as a financial center.

Domestic Economic Condition

Prior to establishing a world-class financial system, the economic condition of a center must be substantial enough to provide a burgeoning financial industry with significant level of economic activity needed to advance and develop. A region that is economically growing at an equal or greater pace than that of the financial services industry must be available to support the center's initial growth as a domestic financial center. If a region with an economically growing nonfinancial industry does not support a

center, its growth as a financial center will be constrained thus hindering the center from achieving global dominance in the financial industry.

Evidence of the stability of a center's domestic economic condition includes a steady growth of its GDP through nonfinancial industries. Evidence that a center's financial strength is correlated to that center's commercial activity is reinforced when comparing the 2008 MasterCard Worldwide Center of Commerce Index, 2008 Forbes Ten Most Economically Powerful Cities, and the Global Financial Centers Index-8. As MasterCard's index is measured by GDP growth and strength, the MasterCard's list of top commercial centers almost identically mirrors the latest Global Financial Centers Index.

Finally, a center must be located in a region with low levels of inflation to show that the economic growth within the center is sustainable and not fleeting. Reasonable levels of inflation will also ensure domestic and international investors that the value of center's currency will remain steady and convertible.

Supported By an Economically Growing Region

A center that caters to a region that is growing economically will generate the need for various financial instruments. The nonfinancial firms within the region will use the center for raising capital, diversification of assets, managing funds, hedging, and insuring their businesses. A center's growth as a financial center will be more sustainable and significant if an economically progressive region supports the center.

Steady Growth of Gross Domestic Product (GDP)

A center marked by a steady growth of GDP provides a strong indication of the stability of its domestic economy. A growing economy is more likely to attract foreign investments into local nonfinancial firms as well as intensifying local competition among these firms. As nonfinancial firms experience growth and dynamically evolve, they will place demands on the services offered by the center.

Relatively Low Level of Inflation

Relatively low levels of inflation will ensure that the domestic consumer's buying power stays relatively stable over time. This will also ensure stable a relatively stable local currency value. If a low level of inflation is kept, interest rates will be kept in check thus making financial resources more affordable to local and foreign investors.

Sources of Capital

Before a center can establish itself as a dominant financial power, it must play host to reasonably sized local, regional, and multinational firms from nonfinancial industries as well. The presence of these industries will create the need for financial instruments for raising capital, hedging risks, and insuring assets. Historically, such need for financial intermediation always precedes the rise of financial firms in any environment.

Furthermore, the critical role of nonfinancial firms goes beyond their need for financial intermediation. Their presence within a center will boost the center's domestic

economic activity and create jobs. The creation of these jobs will enable the center to attract a flurry of white-collar workers and highly educated professionals.

Rising Need for Securitization and Intermediation of Savings

A steady increase of income within a region will create economic activity through consumer spending and saving. As the amount of economic activity and savings accumulate, knowledgeable professionals will begin searching for advice from professionals well versed in financial products for ways to capitalize and earn on their cash savings. A growing demand for capitalization of earnings on excess cash spurs the need for financial firms that can provide sound financial advice to professionals within a center.

Access to Surplus Spending Economic Units (Financiers, Venture Capitalists, High Net worth Individuals)

The rise of Hong Kong as a financial center has been directly correlated to the growth of high net worth and highly educated individuals located within the regions served by the center (Tsoi, 2004). As the assets of these individuals grow, their need for diversifying and protecting assets will also rise and this phenomenon typically precedes the growth of financial centers that catered to them. In the same vein, the services that a center offers will be forced to evolve in order to capitalize on the opportunity to meet the intermediation needs of individuals and firms that have access to vast amounts of capital.

Strong Domestic Customer Base

In a 2004 study conducted by Essie Tsoi of the Research and Planning Department of the Hong Kong Listed Securities and Derivatives Markets, the author noted that the growth of Hong Kong's derivatives market was correlated to the increase of white-collar jobs within the city. She concluded that the most common type of people who invested in the Hong Kong financial market were educated professionals who belonged to a slightly higher income bracket. She stated that the typical investor the Hong Kong market are middle-aged white-collar workers with a higher educational and income level than the average adult individual. Furthermore, as the level of these white-collar increased, the Hong Kong stock market grew as well.

Tsoi's findings confirmed that a critical ingredient to attaining a strong domestic financial industry is the presence of a strong customer base. A strong customer base is defined by a group of employed individuals who are educated, knowledgeable, and financially capable. As her studies showed, this customer base was the most likely demographic who allocated a part of their incomes towards financial securities (Tsoi, 2004).

It is clear that in order to stimulate financial demand at a local level, the strength of the domestic customer base must be sufficient to support the growth of local financial firms. Also, as the humans factors that affect the domestic financial market become more sophisticated and knowledgeable, consumer trends within the center that affect local demand will give financial firms a clearer or earlier picture of rising trends and preferences of investors worldwide.

High Per Capita Income

A slightly higher per capita income will signify that the population within a center has enough resources that can be utilized by financial firms to grow domestically.

A center that is able to retain a high percentage of wealthy and educated individuals within its geographical limits presents evidence that a center's living condition is politically and socially stable. Their continued presence and involvement in the local marketplace also presents evidence that the center's business environment is continually expanding and presents economic opportunities.

High Literacy Rate

As Tsoi (2004) has shown, the demographic that are most likely to have available and investible capital are those who are highly educated. A high literacy rate will certify that a center has a capable workforce that is knowledgeable about the importance of financial firms and the services they offer. This demographic is more likely to invest its excess cash in financial securities and utilize the services offered by financial institutions.

Free Flow of Economic and Financial Information

A free flow of economic and financial information will provide local investors with relevant information regarding their domestic environment. This information will assist them in increasing their economic productivity. Also, providing

accurate information will ensure that domestic and foreign investors are kept knowledgeable about the opportunities within the center.

Dynamism of Local Marketplace and Participants

In *Clusters, Convergence, and Economic Performance*, authors Michael Porter, Mercedes Delgado, and Scott Stern state the importance of clusters. They report that clusters within related and unrelated industries are extremely critical in the creation of new industries and overall economic growth at any level. They state that new industries don't just spring out of thin air but are born out of strong regional clusters. Clusters surrounding a region-industry matters not only for the growth for existing firms within the existing industries but are critical to the creation of new industries within that same region (Porter, Delgado, & Stern, 2011)

In the context of the creation of a financial industry within a center, it is critical for a center to play host to reasonably sized local and multinational firms from nonfinancial industries. Without a dynamic marketplace and competitive participants to engage each other in the domestic market, the economic activity needed to spur the use of financial instruments will not come into play thus barring the birth of a center's financial industry.

Host to Various Sizes of Nonfinancial Multinational Corporations

A center breeds demand for competitive financial instruments when there is a wide array of nonfinancial multinational corporations that operate within the region the center caters to. This is because an increase in the inflow of capital

through a heightened economic activity will spur the need for financial intermediation.

Host to an Abundance of White-Collar Jobs

If center offers an abundance of white-collar jobs, there will be an influx of highly educated individuals that will be coming into the center's workforce. As mentioned previously, this demographic represents the most likely candidates to use financial instruments due to their relative financial freedom and knowledge of securities and their benefits.

Related & Supporting Industries

The presence of complementary nonfinancial industries promotes and assists the development and evolution of a financial industry through knowledge clusters and spillovers

Scope of Global Market Integration

As viable options for global financial intermediation are increasing, a center must be able to provide potential investors, both domestic and foreign, with easy access to its market. The creation of laws and regulations that limit the ability of foreign firms in participating and competing within a center's borders will negatively affect the economic output of that center and its desirability as a source of capital. A firm must be constantly accessible to international investors while being able to keep its domestic investors integrated into the global financial market.

Similarly, from an international investor's viewpoint, compliance to foreign standards and practices ensures that a center's financial system is sound, stable, and trustworthy.

Foreign firms continuously use these standards as points of reference in deciding a center's efficiency, transparency, and level of disclosure in respect to a market's macroeconomic policies, integrity, structure, and security.

A center must strive to keep its stakeholders, investors, and financial firms and institutions connected and within reach of the global marketplace. Internationally, a center must remain globally visible as a premier option and source for raising capital. Domestically, it must be able to keep international sources of capital visible as well providing connectivity to other financial centers to its local customer base.

Access of Domestic Investors to Global Capital Markets

A center must be able to serve as a connector between local investors and the global capital markets. It must be able to provide the necessary information, proper technology infrastructure, and capital regulation so that domestic investors will not have to leave the center in order to access accounts in other financial centers. A center must be able to translate the global differences in reporting, evaluating, and accounting of financial data to its domestic financial market.

Access of International Investors to Domestic Capital Market

A center must also keep its domestic capital market within reach for international investors. It must be able to provide information to any foreign institution or individual investor that requires it at a very reasonable or no cost to the requesting party. The setting up of an online, cross-border trading platform that can be

accessed by foreign traders and investors and accurately mirrors the center's financial exchange will ensure global access to the center's and vice versa.

Implementation of International Standards and Best Practices

A center must require domestic firms to adopt accepted international standards and best practices in accounting, reporting, advising, and management practices to ensure global compatibility of all records and products. Also, adaptation of these standards will ensure that a center's products are globally competitive and compatible to international law.

Growth of Supporting Industries

The growth of nonfinancial firms that provide support for the financial industry is a key factor in determining and sustaining a center's competitiveness. To be more precise, an evolving environment that enables the financial industry to progress must also be present in the industries that provide it with operational, external, and internal support. There must be availability of quality legal services, capable communications technology systems and support professionals, and innovative information technology industry.

As a center expands internationally, its legal services should be able to cater to investors across the globe. As demands, definitions, and uses for various financial instruments evolve and change across borders, a center's reporting service centers must be able to communicate and translate these differences into domestically understandable terms in order to keep the center and its investors updated. In a knowledge-based industry, an evolving information technology industry that provides a center with quality information is key in boosting a center's prestige as financial center. Finally,

communications capabilities of the center must be constantly updated in order to ensure that the center will be able to function efficiently and be capable of relaying information at faster rate and with lower costs.

Multinational Legal and Accounting Service Centers

The presences of international legal services institutions that can provide firms in the center with substantial legal advice across borders will provide promote efficiency and competitive advantage. An easier path to establishing a local presence is provided to foreign entrants by connecting them to an array of familiar institutions with which they have previously established a working relationship with. Centers that are able to implement international accounting standards domestically will complement its domestic financial industry by providing firms with simpler steps in translating cross country accounting and reporting.

Innovative Information Technology Industry

In a knowledge-based industry, the quality of information and the speed that data and information is acquired and turned into useful knowledge will play a key role in determining a center's competitiveness. A center that has access to a dynamically evolving information technology and systems industry will grow at a faster rate.

Up-to-date Communications Capabilities

As location advantages are fast diminishing, the need for strong and speedy communications technology is rising. Constant updates and revision of

communications equipment is vital in providing a financial center with an ability to stay connected to other centers at a lower cost. If this condition is satisfied, a center will be able to integrate itself in the global economy at a faster pace.

Quality of Related Industries

After the initial infrastructure of financial center is set up, constant updating and evolution of industries relevant to the center's initial growth as a financial center are needed. This ensures that as the needs of the global marketplace expands, the center's domestic industries will be able to mature and meet the growing demands of global market.

As the leading competitive factor in determining a financial center's competitiveness is the quality of human capital, a competitive financial center must possess excellent knowledge-creating institutions and education systems. These institutions and education systems must be capable of producing topnotch graduates in various fields relevant to finance like economics, mathematics, and information technologies.

Knowledge spillovers created from the presence of international financial organizations is also essential in creating a competitive advantage. As related informational advances will enhance the knowledge capital of a firm in a related industry, the presence of related organizations ensures that a center remains updated with developments of standards and innovations within the financial industry.

Vibrant hospitality, tourism, and entertainment industries will ensure that a center will be capable of hosting international professionals by creating a captivating environment outside the business arena and providing world-class accommodations. A

stable transportation industry will ensure that the center will remain physically accessible through constant updates to the gateways that lead in and out of the center.

Quality Education and Knowledge Creation Institutions

A center that is able to provide a topnotch higher education system and knowledge creating institutions such as quality universities, research institutions, and graduate and undergraduate study programs will most likely be able to produce, attract, and retain top quality graduates who can provide a competitive workforce.

Presence of International Financial Organizations (IMF, WB, etc.)

The presences of international financial organizations will ensure that a center will remain at the forefront of current developments in global financial standards and practices.

Vibrant Hospitality, Tourism, and Entertainment Industry

A vibrant hospitality, tourism, and entertainment industry is needed in creating a comfortable business environment for visiting expatriates and adding to the quality of life for the local workforce.

Stable Transportation and Logistics Industry

A center's transportation system must remain updated so that it will remain accessible to other centers for travel. Improvement of infrastructure must be done regularly to ensure that issues such as inaccessibility will not hinder the flow of business and damage the productivity of the center.

Center Strategy, Structure, & Rivalry

This addresses the domestic business environment in which firms compete and that shapes their ability to compete in international markets.

General Business Environment

The business environment is an agglomeration of controls, tax regimes, and legal and regulatory structures that affect a firm's overall marketability as a center of commerce and financial activity. If a center has found a proper configuration and balance of these aspects, it will attract firms to set up a presence within the area and retain them as well.

In order to have a dynamic business environment, firms must be able to implement business decisions quickly and without interruption. Factors that relate to increasing the cost of business by raising establishment costs discourage entrepreneurship, and limit market entry and expansion will all weaken a center's competitive position (Securities Industry Association, 2008).

Positive and Non-interventionist Controls and Restrictions

A center's legal, political, and regulatory controls must remain non-interventionist in nature so that economic activities will be able to flow as smoothly as possible.

A significant level of any kind of unjustified interference will only be interpreted as roadblocks to a free-market environment.

Low Cost of Doing Business

Low cost of doing business goes beyond the cost of day-to-day activities. This includes the factors that add to the amount of bureaucratic procedures and

measures needed to establish presence in a center. The higher these factors are, the more entrepreneurial activity is hampered in a center.

Favorable Corporate and Personal Tax Regime

A center's corporate and personal tax regime must remain competitive so that firms and individuals will not see a need to setup other stations outside the center for offshore purposes. A friendly corporate and personal tax regime will attract other firms into building branches in the center to take advantage of these incentives.

Business-conducive Legal and Regulatory Structure

A center's legal and regulatory structure must be setup in a way that will promote the growth of businesses and firms within that center. The legal and regulatory system must be directed in a way that will safeguard a firm's assets while providing a clear and easy path for setting up and running a business.

Capital Mobility

For a center to keep its capital market globally integrated, the firms within its borders must be able to move funds and capital in and out of the center with minimal controls and holding issues. It has been proven that significant barriers to capital mobility are negatively related to the levels of savings and investments within a center (Feldstein and Horioka, 1980).

In order for a center to attract investments that ensue higher economic activity, it must offer a proper balance of barriers that will allow profits to be repatriated back to its

original investors. Investors, both domestic and international, must all be able to fully convert the standard currency of the center into any currency of their choice.

It is also important that a center must establish measures that will allow it to maintain the stability and value of its currency amidst heavy inflows and outflows of capital. By creating a measure that ensures this stability, a center will be able to establish and deepen liquidity within its domestic investors and still allow global investors to gain access to its market.

Minimal Controls over Capital Movement

Institutions and individuals within a center must be free to bring money in and out of a center. However, though a proper regulation measures must be set to control how capital moves in and out, these controls must be minimal and serve only to protect against “hot money” inflows and outflows and not tarnish a center’s reputation as a legitimate global financial center.

Full Convertibility of Currency

The currency within use in a center must be fully convertible in other parts of the world. The center’s monetary control agencies must be able to keep its currency’s value intact and as an accepted means of payment and exchange globally.

Stable Currency Value

The exchange rate regime that is adopted should complement the center’s objectives for financial competitiveness. Investors must be assured that the local currency retains its value over time.

Market Openness to New Entrants

Firm entry should be unhampered, orderly, and streamlined to encourage new firms to set up presence in the center. A center that maintains a reasonable number of firms will be able to spur a timely innovation of products, encourage high domestic competition among firms, and a faster growth of quality firms.

A center's openness is directly related to increasing the available credit and capital to existing firms within a center (Eslamloueyan & Jafari, 2010). As a center opens itself to international banks, foreign firms, and other non-bank financial institutions, it gains knowledge and efficiency through these firms that will ultimately lead to upgrades within the local environment. Also, their presence within the center will provide the center with better access to international credit markets and be less susceptible to idiosyncratic shocks (Havrylchyk, 2010).

Once again, as the human capital is highly critical in a center's bid for dominance as financial center, its immigration policies must provide access for highly qualified professional to positions within a center. By ensuring access to these professionals, a center will strengthen its current workforce while expanding its ability to retain and attract quality talent.

“National Treatment” to foreign firms, banks, and Non-Bank Financial Institutions

Foreign firms must be free to enter without any fears of being nationalized by the government. Foreign investors must be treated the same way and under the same or comparable laws and regulations that can be applied to citizens. These firms

must be free to compete with local firms without fear of being undermined by a center's political establishment.

Low Entry Barriers for Prospective Firms

Prospective firms wishing to setup a presence within a center must be able to efficiently do so as fast as possible. Having low entry barriers will also make a center's local marketplace more appealing to foreign entrants. Low entry barriers will ensure high competition among firms and provide increasing economic activity for the center.

Low Work Restrictions Facing Skilled Professional Workers

A center's workforce must remain globally competitive in all stages of economic development. A workforce will only remain competitive if a center continuously attracts and retains skilled workers when such workers realize that restrictions to work, study, or live in the area are relatively lower than other comparable centers

Regulatory Balance and Enforcement

Marked as the third and fourth most critical aspects in determining a center's global position as a financial center, (Bloomberg and Schumer, 2007) a center's regulatory environment and its enforcements ability are key aspects of attaining and maintaining competitiveness. Bloomberg and Schumer (2007) indicated in their report that a strong regulatory system was vital in giving market participants confidence in the market they are in. He further states that a center's regulatory environment must remain able to adapt

to market changes and adjust to rapid globalization in order to remain relevant as a financial center (Bloomberg and Schumer, 2007).

A methodical and independent regulatory system that requires minimal interference and communicational requirements with firms is needed to ensure no loss of productivity for financial firms when dealing with regulatory issues. According to Bloomberg and Schumer, business leaders continue to see UK's regulatory system as superior to that of the United States because the American system's complexity, cost, and perceived lack of responsiveness ((Bloomberg and Schumer, 2007).

Schumer further states that if the American system does not become highly responsive and institute reliable enforcement of its policies to ensure continuity and predictability of practices, it will lose attractiveness as a financial center in the future.

Sound Framework for Prudential Supervision

Regulatory supervision must be transparent in providing market-oriented solutions that still retains a high standard of investor protection. The regulatory framework must be readily understandable by both domestic and international investors and participants so that it remains universally understood and relevant.

Responsiveness of Regulators

Regulators must be efficient in providing solutions to investors' concerns. If a situation arises, regulators must be quick to assess and adapt future policies to what the circumstances demand to minimize any losses of productivity and ensure a continuity of business.

Simple and Cohesive Regulatory Structure

A center must establish a simple system that requires minimal interaction between firms and regulators when conducting business. Single communication points between the regulators and firms must be established to promote an efficient system that will not act as a hindrance for communication and regulation.

Legal and Judicial Environment

A firm's legal environment and structure must be easily navigable and understandable by market participants. It must be up to par with international standards so that it is easily enforceable between domestic and international participants. Practices must be transparent and reliable to ensure continuity of law. The laws themselves must be dynamically evolving to better suit the changing global financial environment.

As Schumer and Bloomberg (2007) indicates this as the second most important aspect of a financial center's competitiveness, the Securities Industry Association (2007) marks that a center's legal and judicial environment must be independent, allow market participants to assume economic risks and repercussions of their financial activities, independent of political influences and interferences, and be corruption free.

Legal System is Based on Common Law and Equity Law

As common law is based on precedent and case law, equity law must properly balance it when there is no precedent to the case so the presiding jury can use an adaptation of related laws to render judgment. A center that is able to build a legal

system based on these will be able to build a legal environment that will be able to protect users and promote competition.

Easily Enforceable by an International Independent Judiciary

A center's legal system must be internationally understandable so that multinational firms who pursue legal action domestically and seek foreign counsel are able to do so. An easily enforceable and understandable legal environment will allow a center to be more accommodating to multinationals that have little understanding of the domestic legal system.

Dynamic Evolution of Company Laws, Banking Laws, and Security laws

For a center to remain competitive, its laws on companies, banking, and securities must be dynamically evolving to cater to the growing and changing needs of consumers globally. It must be free to adapt changes and provisions when there is a need for it without drastically changing the whole legal structure.

Local Rivalry among Firms

For a firm to remain competitive as financial center, a proper balance must be established between a firm's ability to acquire other firms and the measures taken to prevent monopolies from rising. Larger institutions must be kept in check to prevent a center's market performance and productivity from becoming wholly contingent on the performance and productivity of these larger firms.

Similarly, smaller firms must be allowed to compete without fear of being predatorily taken over while stronger firms must be allowed to grow to maintain deep sources of

capital. They must be given the freedom to reorganize and reposition resources amongst themselves in order to become better and stronger competitors against more mature and financially stronger competitors.

Autonomy of Firms to Merge and Acquire Other Firms

Firms in a center must be allowed to pool capital, human, and physical resources in order to better equip themselves in competing at a global and domestic level. A center will remain competitive if its firms are able to utilize and maximize all the available resources in creating a domestic competitive environment.

Anti-monopolistic and Antitrust Policies in Effect

A balance must be ensued in order to prevent a center's financial industry and market on becoming heavily dependent on a small number of firms. By doing so, a center will continue to foster competition and continuous innovation through the existence of rivals in the marketplace. In layman's terms, firms must not reach that critical point where they are "too big to fail".

CHAPTER 8: SUGGESTED PATH FOR FUTURE RESEARCH

As the topic of this paper covers a wide scope of knowledge and disciplines, the utilization of a technique that would be able to correlate differing opinions towards a general consensus is needed. As there is a lack of empirical evidence to validate the theoretical model, the technique employed would have to utilize the subjective judgments of relevant individuals in establishing quantitative evidence for the theoretical model. The implementation of the Delphi method is highly recommended to be used to provide quantitative content for the model.

Olaf Helmer, Norman Dalkey, and Nicholas Rescher (Hsu & Sandford, 2007) developed the Delphi method in the 1950s to overcome the shortcomings of forecasting methods in areas where precise scientific laws have not been established. It was designed as a group communication process aimed at converging opinions and real-world knowledge from experts within certain fields through a series of sequential questionnaires and controlled feedback between multiple rounds (Hsu & Sandford, 2007). Though limited by factors such as strict time frames, unintentional guiding towards a preferred response by the facilitator, and possible low rates of feedback, the Delphi method exhibits an advantage in fields of study where there is a lack of empirical evidence to prove or disprove theories.

The Delphi method seeks to silence the influences of powerful individuals in conventional and unstructured methods of reaching a consensus such as a committee. In committees, the personality traits and seniority of experts involved exhibit a biased effect on the outcome. Participant anonymity promotes a democratic and structured approach and adds objectivity to the final outcome by decreasing the inclination of respondents to just follow the leader and the general consensus of the most vocal individuals.

However, because of the anonymity of respondents, lack of accountability towards views and judgments expressed in the study may be argued against the Delphi method. In response to this, respondents chosen and tested must exhibit a current and relevant knowledge in the field. The quality and caliber of respondents chosen are critical to achieving a fundamentally sound consensus and model. The quantitative study can be completed with a panel size of 6 to 15 qualified experts who are well versed in the relevant field (Turoff & Linstone, 1975).

CHAPTER 9: LIMITATIONS

This model outlines the fundamental areas a center must continually develop to maintain its competitiveness as a financial center. As the model encapsulates a general view of a financial center's road to prominence, it can be used as a benchmark for developing financial centers in line with the fundamental areas delineated in the model.

While this thesis is limited to the development of a theoretical model, the factors and indicators that have been outlined can be quantified in terms of significance and importance. Though each factor's critical importance within the model is theoretically undisputable, their significance in quantitative measures can only be gained through surveys of relevant experts in the field. Also, since the model draws from multiple disciplines, a general method of providing quantitative content for each factor's significance is beyond the scope of this thesis.

Due to time constraints and limitations, this thesis did not quantitatively rate the theoretical model it outlines. Though the aspect of quantitatively differentiating the factors is important, it goes beyond the scope of this thesis. Such an exercise is left for future research.

CHAPTER 10: CONCLUSION

This thesis combined the factors that have contributed to the initial growth of the top global financial centers of the world and have allowed them to maintain their global competitive advantages into a comprehensive model of financial market anatomy. The model allows tracking of the evolutionary pattern of how a commercial center is transformed from serving the financial intermediation needs of its local customer base, to serving at a regional level, and finally serving at a global level. It illustrates the basic necessary conditions a commercial center must satisfy in order to achieve prominence as a global financial center. With an understanding of the conditions that form the foundation of a financial center, the anatomy of a global financial center can be better understood.

The resulting theoretical model combines critical benchmarks that have marked the journeys of today's top financial centers with the framework of Porter's model for national competitive advantage. Porter's framework was originally developed for increasing productivity at a macroeconomic level but this thesis adapts the model to address the microeconomic case of an industry of a financial center. As the adapted diamond model demarcates a growth model for financial center, it retains Porter's grouping corners and gears them towards identifying relevant macroeconomic and microeconomic factors that strengthen at a microeconomic level.

This model concentrates on expanding historically proven factors and provides an alternative way of viewing them through a competitive advantage model such as Porter's Diamond. The model's parameters and its factors exhibit dynamic relationships amongst

themselves that are extremely critical to the model's success as a growth path. Identification of these relationships through this model is what this thesis ultimately contributes to the literature.

Finally, this thesis concludes that the individual importance of the factors is not concrete and set in stone. Their relevance will continuously evolve to mirror the changes in the global marketplace. So the theoretical model presented in this thesis establishes a system that captures the current global situation of financial centers and the factors that have contributed to their growth up to this point. As the global marketplace and the factors that affect it evolve and expand, the factors used in the model must be updated. The importance of this thesis is seen in the dynamic nature of the adapted model. The system it establishes can be responsive to technological advances that affect the model's relevant factors.

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