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Abstract: B2B sales faces a challenge because its knowledge is fragmented and to progress it needs a systematic body of knowledge. Moreover, theory develops slower than what practitioners need solutions to their problems, and consequently practitioners consume little academic literature. This contributes to the theory-practice divide that characterizes applied disciplines, like sales. The academic literature is limited regarding B2B sales models, while practitioner literature refers to such models, which are not necessarily rooted in theory. Hence, this conceptual paper presents a synthesized hotel B2B sales model, relevant to practitioners, while anchored in theory, based on a review of academic and practitioner literature. This is in response to calls for further research to integrate fragmented existing theory and to bridge the theory-practice divide. The paper shows that (i) the hotel B2B sales model comprises complex constructs, which hold challenges for theory development; (ii) the (major) hotel corporations operate in all modes of Inter-Organizational Integration and various relationship strengths – i.e. transactional, consultative, collaborative and strategic; and (iii) economic and behavioral theories explain this evolving model. The contribution of this paper stems from enhancing understanding by integrating fragmented knowledge, while clarifying ambiguous concepts. Implications, include that selling organizations need to carefully select buying partners according to the mutually agreed upon values to be exchanged in the different selling modes. Limitations include that the model is based upon practices of the world's largest hotel corporations, based in the USA, and thus findings may be less transferable to smaller, less resource-rich hotel firms. Information regarding hotel B2B sales is limited as most of this information is believed to be competitively proprietary and difficult to access. Future research remains to detail each of the components in the proposed hotel B2B sales model and whether and to what degree the model can be useful to especially smaller and less resourced hotel corporations.

Abstract: The paper explores the information content of country risk ratings and provides a methodology to compute equity risk premia in countries with or without capital markets. The data used in the study consists of (1) total return indices from MSCI and EMDB for 85 capital markets, (2) Fama and French global risk premia, and (3) ICRG composite, political, economic, and financial country risk ratings for a period starting in January 1985 and ending in January 2017. After orthogonalizing each market's total return with global factors, portfolios of markets are sorted into quantiles of composite, political, economic, and financial country risk ratings. The paper shows that (1) portfolios of countries with lower ratings have orthogonalized returns statistically greater than those with higher ratings, and (2) this "low-minus-high" (LMH, hereafter) rating premium is larger than and uncorrelated with global risk premia. Finally, the paper provides a methodology for benchmarking the equity risk premium for countries with or without a capital market; estimates are compared to published equity risk premia. That is, the relationship between country risk premium and risk rating is calibrated with data prior the great recession; then, the equity risk premium of one hundred and forty countries are implied using risk ratings for 2017 and compared to concurrently published equity risk premia. Findings show no statistical difference in measurement between equity risk premia calibrated with an earlier estimation period and the ones recently reported by publicly available sources. The article concludes that country risk premia, proxied by global-factor-orthogonalized LMH, are non-diversifiable, compensate for the lack of regional integration, and can be used to estimate the equity risk premium for countries without capital markets.

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Abstract: The success m-government services implementation can be, only if significant engagement between the government and its people occurred. Attaining adoption of m-government services by people is a serious challenge. To fill this gap, this study developed a research model to investigate the major factors affecting users' intention to use m-government services. A quantitative research approach was utilized. Data was collected using a survey questionnaire. The results discovered that users' awareness was significant to positively affect user's perceived usefulness, as well as, perceived ease of use, but not perceived cost, nor perceived risk. User's mobile experience leaves positive influence on user's perceived usefulness as well as perceived ease of use, and failed to affect perceived risk. Perceived ease of use increases perceived usefulness, but not perceived risk; perceived cost leaves positive effect on perceived risk. Each of perceived usefulness, perceived ease of use, perceived cost, and perceived risk were significant determinants on intention to use m-government services. This study adds to the literature review in the field of m-government, hypothesized potential effect of several factors, and discovered what influences peoples' intention to use m-government. The role of uses' awareness of m-government services as well as their experience in using mobiles. The Saudi government is advised to increase the peoples' awareness about m-government services; guarantee the ease of using m-government, which encourage users to earn greater benefits from using such technology. The Government should pay a consideration to the m-government services' costs and user's feeling of risk. The Saudi government is advised to follow a secure mechanism.

EDITORIAL

The 1st study by **Pat Obi, Shomir Sil & Raida Abuizam** utilize the autoregressive distributed lags (ARDL) model *a la* Pesaran *et al* (2001) to investigate the short- and long-run impact of implied volatility on the inverse relationship between oil price and exchange rate. Empirical data were obtained from the six-year period after the end of the 2008-2010 Global Financial Crisis. Implied volatility is included in the trivariate model to determine if investor perception of short-term volatility is instrumental in the oil-dollar dynamic. The specific intent is to ascertain if implied volatility contributes to the valuation of crude oil and by that fact, in the observed inverse relations between oil price and exchange rate.

The persistence of the inverse correlations between oil price and exchange rate exposes oil-exporting economies that rely on oil revenues to two conflicting financial effects. The first is that export receipts, which are denominated in US dollars, decline with falling oil prices. The second is that the purchasing power of the dollar generally appreciates during such times. With these interposing outcomes, it is arguable that in some cases, losses on oil sales may be counterbalanced by gains in the value of the underlying currency, which is the US dollar. The authors address these implications in their policy recommendations.

Empirical results show the three variables – oil price, exchange rate, and implied volatility – are cointegrated. There is a bi-directional long-run causality between oil price and exchange rate and also, between oil price and implied volatility. In the short run, researchers find only a unidirectional causality running from oil price to exchange rate as well as to implied volatility. In all cases, the relationship between exchange rate and volatility is muted, causing the researchers to suspect that the oil-dollar inverse dynamic is largely on account of the market's assessment of short-term risk.

Overall the study by Obi, Sil, & Abuizam demonstrates that in addition to exchange rate effects, investor anxiety plays a role in the valuation of oil. This dynamic adds to the fact that the US dollar is the denominating currency for most global commodities. Consequently, when crude oil prices fall, the reduced dollar revenues for non-dollarized oil-producing economies are at least partially offset by the rise in the purchasing power of the dollar.

Three policy implications are identified by the authors. First, given the direct impact of implied volatility in the pricing of oil, the need for a stable energy policy, especially for oil-dependent economies, is essential. Such a policy would be designed around predictable oil production so that variation in demand rather than supply is the key driver of oil prices. This would also serve to reduce the unpredictability of fiscal revenues for these countries. Second, the existence of a long-run inverse relationship between oil price and exchange rate makes it imperative for oil-producing countries that rely primarily on oil revenues to redirect their fiscal planning to domestic resource utilization. Paying for their fiscal priorities in the domestic currency would save money when the dollar rises in value. In this way, the negative effective of declining oil price is countered by the rise in the purchasing power of the dollar. Third, to reduce its exposure to the danger of the so-called *Dutch disease*, it would be prudent for the developing economies

that are oil-dependent to diversify. Doing so obviates the danger of a rapid decline in other sectors of the economy owing to the lopsided dependence on petroleum.

International business professors and economists give much attention to U.S. balance of trade statistics such as those involving Japan and China as well as to statistics about the total international trade performance of the US, because all three are perpetually in significant deficit. The United States has been and continues to be referred to commonly as the richest country in the world. Yet, how rich is the country is open to a variety of interpretations. Though the US has the biggest economy measured in terms of the dollar value of its GDP, it is far from and has not had for many years top ranking by the criterion of per capital income.

How rich is America? It seems that when measuring America's wealth, there is a tendency to use "single entry book-keeping": the dollar values of the nation's assets are summed up but then there is a reluctance or failure to subtract from that sum the dollar value of the nation's debts and liabilities. One relevant indicator of America's changing wealth position in the world looks at the net investment position of the country over time. Namely, what is the dollar value of the assets US interests owned outside of the country minus the dollar value of the assets owned by foreign entities inside the United States?

The 2nd study by **Robert Vambery** uses large data sets involving the international trade of the United States with 12 of its leading trading partners over a 10-year period. Then the study and the associated analyses are repeated for a subsequent 10-year period. The mathematical formula used for the analyses is called "coefficient of trading partner exploitation". Attempt is made to quantify whether persistent trade imbalances are the results of deliberate and selfish if not mal-intentioned trade policies.

Specifically, Vambery examines the extent and degree to which the US benefited from *reciprocal globalization* or suffered from being subjected *to one-way globalization.* The resulting evidences obtained in the study indicate that in a globalized trading environment in which countries are supposed to have opened up to foreign suppliers, in practice, what is observed is much *one way* rather than *reciprocal globalization.* The *simultaneous practice of globalization and mercantilism* may not be desirable for the growth of international trade or for the welfare of the world as a whole.

Yet in contrasting theories of mercantilism with the free trade concepts of globalization and by conducting quantitative analyses of US trade with its leading trading partners over twenty years, the paper leads toward a conclusion that the *simultaneous practice of globalization and mercantilism* is a winning formula in international business for countries that are able to implement it, whether with the approval by or over the opposition of their trading partners. Are some significant trade wars being launched in 2018 or are we just witnessing the beginnings of some self-defending actions by countries hurt by less than fair trade practices?

The 3rd paper by **Richard McNeill & Hester Nienaber** strives to bridge this chasm by developing a working model-a conceptual framework-to describe today's hotel B2B buyer/seller interactions and potentially serve as a guide for further research. This working model is based on a synthesis of both practitioner and academic literature. Consequently, it should be relevant for

practitioners, while anchored in theory as both economic and behavioral theories can be used to explain this model.

Group and meeting business are considered B2B sales and delivered by a human salesforce, which is influenced by digital disruption. Resource-rich hotel corporations, commonly in the top three STR (*Smith Travel Research*) tiers, primarily compete in B2B sales where the meeting space and level of attractive service and amenities exist. The preliminary hotel B2B sales model developed in McNeil & Nienaber `s study reflects two primary variables that can describe the varying forms of hotel B2B sales practiced today: *Relationship Strength Level* (Y axis) and the *degree of Inter-Organizational Integration* (X axis). The intersection of these variables indicates *modes of value exchange* which are appropriate and recommended for B2B salesforce interaction with their customers. In short, buyers and sellers each visualize and require values that exist only in a desired and *ideal* form until manifested when both parties actually engage and begin to exchange these values.

No single *mode of value exchange* is appropriate for all buyer/seller B2B interactions. Remembering that buying and selling is a two-way interaction, both buyers and sellers have preferred and less preferred engagement partners which both buyers and sellers can and do rank and, then, select their trading partners by some metric. The preliminary hotel B2B sales model developed in this paper uses Pareto's 80%/20% principle for this metric. Based on two primary B2B sales variables (X and Y axes) and simultaneously assessed by both buyer and seller, this preliminary model describes appropriate *modes of value exchange* across a continuum of mutually preferred, selected, and identified engagement partners. Though, future research remains to detail each of the components in the proposed hotel B2B sales model.

The 4th paper by **Eric Girard** explores the information content of country risk ratings and provides a methodology to compute equity risk premia in countries with or without capital markets. Two research questions are investigated: [1] Is the size of country risk premia inversely related to country risk ratings? [2] Can a country's equity risk premium be measured as the sum of referential global risk premium and a country risk premium?

The study covers a period starting in January 1985 and ending in January 2017; the data used in this study consists of (1) total return indices from Morgan Stanley Capital International and Emerging Markets Data Bank index for eighty-five capital markets, (2) Fama and French five global risk premia, and (3) International Country Risk Guide composite, political, economic, and financial country risk ratings.

Regarding the first research question, each market's total return is orthogonalized with global factors, then portfolios of markets are sorted into quantiles of composite, political, economic, and financial country risk ratings. The paper shows that (1) the ones with lower ratings have orthogonalized returns statistically greater than those with higher ratings, and (2) this "low-minus-high" (LMH, hereafter) rating premium is larger than and uncorrelated with global risk premia.

For the second research question, the equity risk premium of countries with or without a capital market is estimated by augmenting a referential global risk premium with a country risk

premium, proxied by LMH. That is, the relationship between LMH and risk rating is first calibrated with data before the great recession; then, the equity risk premium of one hundred and forty countries are implied using risk ratings for 2017. Findings show no statistical difference in measurement between equity risk premia calibrated with an earlier estimation period and the ones recently reported by publicly available sources.

In sum, the study shows that country risk premia, proxied by global-factor-orthogonalized LMH, are non-diversifiable, compensate for the lack of regional integration, and can be used to estimate the equity risk premium for countries without capital markets. The paper further highlights the advantages of using the composite country rating published by the International Country Rating Guide: They are forward-looking and can be used to evaluate risk premia for countries without capital and debt markets. Also, they change through time much more often than and independently from the ratings published by other major rating agencies—e.g., Moody's, Standard and Poor's, or Fitch have been shown to adjust their sovereign ratings based on each other's upgrades and downgrades.

The article ends with some words of caution for practitioners and suggests exercising judgment call when evaluating an equity risk premium: First, the evaluation of a required rate of return is somewhat arbitrary since the estimation of a country's equity risk premium is sensitive to both model calibration and the methodology employed. Second, the paper argues that the size of LMH is arguably too small and all models or econometric methods tend to overvalue equities in countries with higher economic, financial, and political risk—e.g., positive and negative premia tend to be averaged out over time since during crises (bubbles), and a riskier portfolio will lose (return) more than a safer one.

The success m-government services implementation can be, only if significant engagement between the government and its people occurred. Attaining adoption of m-government services by people is a serious challenge. Therefore, the 5th study by **Ayman N. Alkhaldi** aims to fill this gap through a developed conceptual model to examine the major factors affecting users' intention to use m-government services in Saudi Arabia. Specifically, Alkhaldi`s study aims to answer two research questions: [1] What are the major factors that affect users' intention to use m-government services in Saudi Arabia? [2] How do Saudi's perceive such factors?

Quantitative approach by survey method technique was used. The questionnaire was designed for the research comprises close-ended questions. Data collection was driven using a cross-sectional survey. Online-based questionnaire was sent randomly to 1900 person in various regions in Saudi Arabia. As a result, 426 usable responses were received, where the overall response rate was 22.42 %. SPSS v.22 was used to analyze the data.

The study by Alkhaldi enriches the literature of m-government field of study, and concludes the importance of investigating the user's perspectives in m-government. The results demonstrated that users' awareness was significant to positively affect user's perceived usefulness, as well as, perceived ease of use, but not perceived cost, nor perceived risk. User's mobile experience leaves positive influence on user's perceived usefulness as well as perceived ease of use, and failed to affect perceived risk. Perceived ease of use increases perceived usefulness, but not perceived risk; perceived cost leaves positive effect on perceived risk. Each of perceived usefulness,

perceived ease of use, perceived cost, and perceived risk were significant determinants on intention to use m-government services.

The author recommends that the Saudi government should increase the peoples' awareness about m-government services; guarantee the ease of using m-government, which encourage users to earn greater benefits from using such technology. The Government should pay a consideration to the m-government services' costs and user's feeling of risk. The Saudi government is advised to follow a secure mechanism.

Since awareness of services factor was failed to affect perceived cost of services, and perceived risk as hypothesized, researchers are recommended to investigate in-depth, as why cannot have impact; and examine other relevant factors, such as credibility, and/or trust. Further, the population sample consists of a large number of males, but a small number of females, which might be unbalanced and resulting in accurate findings especially in Saudi Arabia, where gender is a powerful covariate. Future researchers are advised to focus on a specific type of m-government (e.g. SMS government services) probably have differences in usage and adoption.

Nick Delener, Ph.D.
Editor-in-Chief

NOTE FROM THE EDITORS

As an interdisciplinary indexed journal, *The Journal of Global Business and Technology (JGBAT)* serves academicians and practitioners in the fields of global business and technology management and their related areas. JGBAT is also an appropriate outlet for manuscripts designed to be of interest, concern, and applied value to its audience of professionals and scholars.

Readers will note that our attempt to bridge the gap between theory and practice has been successful. We cannot thank our reviewers enough for having been so professional and effective in reiterating to contributors the need to provide managerial applications of their research. As is now obvious, the majority of the articles include a section on managerial implications of research. We wish to reiterate once again our sincere thanks to JGBAT reviewers for having induced contributors to answer the "so what?" question that every *Journal of Global Business and Technology* article is required to address.

Thank you for your interest in the journal and we are looking forward to receiving your submissions. For submissions guidelines and requirements, please refer to the Manuscript Guidelines at the end of this publication.

Nick Delener, Ph.D., Editor-in-Chief
F. Victor Lu, Ph.D., Managing Editor

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AN ARDL MODEL ON OIL PRICE, EXCHANGE RATE, AND IMPLIED VOLATILITY

Pat Obi, Raida Abuizam and Shomir Sil

ABSTRACT

Using the ARDL bounds testing approach, this paper investigates the linkages among three macroeconomic variables: oil price, exchange rate, and implied volatility. The purpose is to determine if implied volatility contributes to the valuation of crude oil and by that fact, in the observed inverse relationship between oil price and US dollar exchange rate. Using empirical data from the post 2008 financial crisis period, this study finds evidence of cointegration among the variables. Specifically, a bi-directional long-run causality exists between oil price and exchange rate and also, between oil price and implied volatility. In the short run, however, a unidirectional causality from oil price to exchange rate as well as to implied volatility is found. In all cases, the relationship between exchange rate and volatility is muted, causing us to suspect that the oil-dollar inverse dynamic is largely on account of the market's feeling of foreboding as reflected in implied volatility. Given these findings, we offer a set of policy recommendations that highlight the benefits of economic diversification and domestic resource utilization.

Keywords: Oil Price; Exchange Rate; Implied Volatility; Bounds Testing; Granger Causality

INTRODUCTION

The pricing of crude oil and its relationship with the valuation of financial and nonfinancial assets remains a central issue in the financial literature, especially those dealing with derivatives and risk. These studies attempt to determine if and to what extent oil price is related to these assets in order to draw inference on causality and policy direction. Examples of assets against which petroleum price has been investigated include agricultural products (Nazlioglu and Soytas, 2012), precious metals (Chang et al, 2013; Beckmann and Czudaj, 2013), equities (Ghobadi and Sharifi, 2015), and currencies (Elham Broadstock et al, 2016; Kaplan and Aktas, 2016).
At the macro level, Reboredo et al (2014), and Razgallah and Smimou (2011) are part of a body of research that has examined the interrelationships between oil prices and exchange rates. While findings in these studies show mixed

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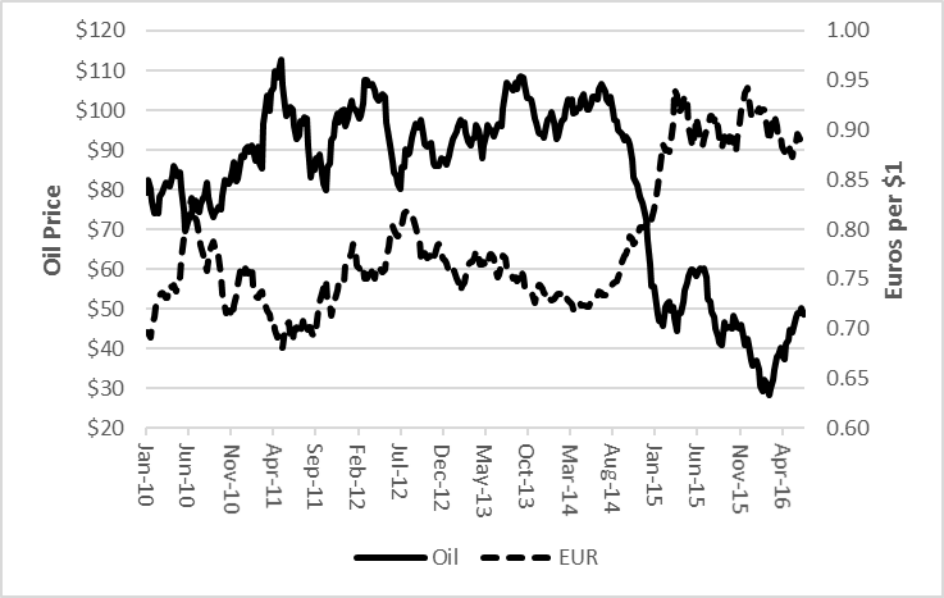
results, in terms of the depth and direction of causality, the negative relationship between the two series remains consistent, especially in the post 2008 Global Financial Crisis period.

This study builds upon the existing literature by introducing a measure of market risk in a trivariate model that uses the autoregressive distributed lags (ARDL) bounds testing method. The model examines the impact of implied volatility on the short- and long-run negative relations between oil price and the US dollar exchange rate in the post financial crisis period. The systematic risk relevance of exchange rate in asset pricing has been variously investigated, most recently by Muzindutsi and Niyimbanira (2012) using equity data from South Africa. Figure 1 shows the recent trend in the inverse correlations between oil price and exchange rate, with the latter calculated in euros per US dollar.

Figure 1. Evolution of the WTI Crude Oil Price and US Dollar



Correlation coefficient: r = -0.88

Since the end of the Great Recession in 2010, the price of West Texas Intermediate (WTI), the North American crude oil benchmark, declined steadily, dipping to a low of $28 per barrel in February 2016. Earlier, in July 2008, it traded at more than $142 per barrel. Over the same period, the dollar rose sharply against most free floating currencies exacerbating its inverse correlations with crude oil price.

As it turns out, the persistence of the inverse relations between oil price and exchange rate exposes oil-exporting oil-dependent economies to two conflicting financial effects. On the one hand, export receipts which are denominated in US dollars decline with falling oil prices. On the other hand, the purchasing power of the dollar rises as it appreciates in value. Data from the US Energy Information Administration show that Nigeria and Russia, two of the world's largest oil exporters, rely on petroleum for more than two-thirds of their export earnings. Using these two oil-dependent economies as an example, the net effect of the divergent impacts of the oil-dollar inverse relationship are summarized in Table 1. The calculated revenues are based on the average daily oil production of 2.3 million barrels for Nigeria and 11 million barrels for Russia.

As can be seen, the 38 percent decline in oil price over the period led to a parallel decline in total gross dollar revenues for the two economies. However, after conversion to their local currencies, the gross revenue for Nigeria declined by only one-half of the rate at which the USD revenues fell. Russia's gross oil revenues actually increased by 33 percent. This outcome suggests that if these economies are self-sustaining, the sharp fall in the price of oil during the period should, at worst, not be as adverse and at best, a net benefit to the respective economies.

Table 1. Crude Oil Revenue Change: January 2010 – June 2016

		ADR (USD)				ADR (local currency)	
	Oil Price	**Nigeria**	**Russia**	**FX: NGN**	**FX: RUB**	**Nigeria (NGN)**	**Russia (RUB)**
1st day in-sample	$79	$181,861,000	$869,770,000	147.54	30.08	26,831,770,719	26,165,377,887
Last day in-sample	$49	$112,010,000	$535,700,000	199.25	64.75	22,317,992,500	34,686,575,000
% Change	-38%	-38%	-38%			-17%	33%

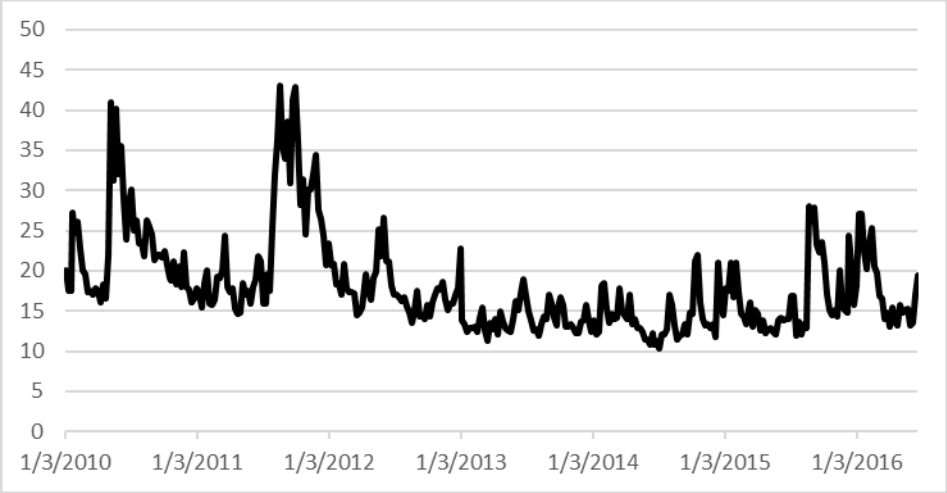
ADR = Average daily revenue, based on 2015 average daily production of 2.3m bbl (Nigeria) and 11m bbl (Russia).
Source: U.S. Energy Information Administration (https://www.eia.gov/beta/international)

In all of this, the uncertainty in the supply decisions by the 13-member cartel of the Organization of Petroleum Exporting Countries (OPEC) make the pricing of crude oil particularly tenuous at best. This is because OPEC's share of world crude oil reserves is about 80 percent, generating approximately 40 percent of the total global oil production. Additionally, and according to the US Energy Information Administration (EIA), OPEC's oil exports represent about 60 percent of the total petroleum traded worldwide. Given these facts, the inclusion of implied volatility in this study is designed to capture the impact of geopolitical risks on the pricing of crude oil.

The implied volatility index, which is compiled by the Chicago Board Options Exchange (CBOE) is widely used in financial studies to capture the impact of expected market risks. The constructed index, called VIX, is based on the price of option contracts on the broad-based S&P 500 index. Because options are bets on future stock price movements, this metric serves as a barometer of near-term shock, rising as uncertainty grows and falling as the market stabilizes. Recent studies that have demonstrated its appropriateness as a market risk indicator include Qadan (2013), Kownatzki (2016), and Caldara and Iacoviello (2016). For example, using a time series index of geopolitical risk, Caldara and Iacoviello find that higher geopolitical risk is associated with increases in VIX, lower oil prices, and higher credit risk spreads.

For most of the sample period of this study, VIX was generally benign except at two instances in 2010 and 2011 when heightened tensions between Saudi Arabia and Iran rattled the commodity markets. In normal times, VIX tends to stay within the bounds of 10 and 20 points, as Figure 2 shows.

Figure 2. CBOE Volatility Index, VIX



Data source: Chicago Board Options Exchange

LITERATURE

In many studies on the oil-US dollar relationship, the exchange rate variable is either a currency index or nominal effective exchange rate. The latter is a measure of the value of the underlying currency measured against a weighted average of several other currencies. Given the observed inverse relationship between the two series, most of these studies attempt to reach conclusions on two key interrelated questions. The first is, are the two series related in such a way that would allow for a substantive inference on their future long-run dynamic? The second and perhaps more important question is, what is the nature and direction of causality if in fact the two series are cointegrated.

With respect to the first inquiry, Coudert and Mignon (2016) utilize data from 1974–2015 and find the two series are linked by a negative relationship, with causality running from real effective exchange rate to real oil price. This finding is consistent with earlier evidence presented by Reboredo (2012), Geman and Kharoubi (2008), among others. In a study on the impact of oil price on the prices of agricultural commodities, Nazlioglu and Soytas (2012) find that oil price changes have a negative impact on commodity prices. They also confirm the positive impact of a weak dollar on agricultural prices. Novotny (2012) explains that this inverse relationship occurs because of the increasing use of crude oil futures to hedge against the risk of dollar depreciation, a practice that is more likely to occur during periods of monetary easing by the U.S. Federal Reserve. To hedge, investors redirect their funds into crude oil, which then causes its price to rise. Other studies supporting this view include Andreas and Cuaresma (2008), Kisswani (2016), Habib et al (2011), and Kalamova (2007).

Reboredo at al (2014) went further to explain that the oil price-exchange rate correlations were mostly negative and low, with lower values for longer time periods. They show, however, that the negative interdependence increased from the onset of the 2008 Financial Crisis. Ibrahim et al (2014) then compare the intertemporal correlations between oil price and the currencies of the G20 countries. For each pair of oil price-exchange rate, their results also show a strengthening negative correlation since the financial crisis.

In all of this, there is yet to be a consensus on the direction of causality between oil price and exchange rate. Among the studies concluding that oil price Granger causes exchange rate are Chen and Chen (2007), Habib and Kalamova (2007), Lizardo and Mollick (2010), Nazlioglu and Soytas (2012), and more recently, Yilmaz and Altay (2016). By investigating a monthly panel of oil price and the currencies of G7 countries between 1972 and 2005, Chen and Chen find that real oil prices were a dominant source of real exchange rate movements. Lizardo and Mollick find, moreover, that increases in oil prices lead to a depreciation of the dollar against the currencies of three net oil exporter countries. Additionally, Yilmaz and Altay show evidence of oil market volatility spillover on the forex market.

Examples of studies that find evidence of causality from exchange rate to oil price include Coudert and Mignon (2016), Novotny (2012), and Cuaresma and Breitenfellner (2008). Ahmet et al (2015) investigate the nature of this relationship for the Romanian currency, the leu, using monthly data from November 2004 to December 2011. Similar to other studies, they confirm the two series to be cointegrated, with causality running from real exchange rates to real oil prices both in the medium and long terms.

Studies showing evidence of bidirectional or mixed causality include Jahan-Parvar and Mohammadi (2011), Kisswani (2016), Kaplan and Aktas (2016), Rezitis (2015), and Sahbaz et al (2014). Using panel data from 1995 to 2014, Kaplan and Aktas find mixed results in an examination of the effects of real oil prices on the exchange rates of five oil-dependent countries. After accounting for cross-sectional dependency and cross-country heterogeneity, their results show that increases in real oil price positively affect real exchange rate when the currencies are considered as a group. When currencies are considered separately, they find that oil price has no effect on the US and Chinese currencies, positively effects the currencies of Canada and Mexico, and negatively effects the Russian ruble. Jahan-Parvar and Mohammadi (2011) expand Lizardo and Mollick's (2010) data to include fourteen oil exporting countries using the ARDL model as in this study. Their findings show evidence of causality from oil prices to exchange rates in four countries, exchange rates to oil prices in two countries, and bidirectional relations in another four countries. They find no evidence of causality for the remaining four countries.

Two recent studies that investigate the relationship between oil price and volatility are Agbeyegbe (2015) and Yilmaz and Altay (2016). Using a bivariate model, Agbeyegbe attempts to determine if an equilibrium relationship exists between oil price return and the CBOE crude oil volatility index, OVX. Although the study finds a negative relationship between the two variables, it also shows that the strength of the relationship depends on the quartile at which it is being investigated, with the relationship becoming an inverted U at higher quantiles.

Similar to the econometric model of this paper, Yilmaz and Altay (2016) use the ARDL bounds testing approach in their investigation of the relationship between oil price and exchange rate volatility for the Turkish currency, the lira. Their results show the two series to be cointegrated. They find, in particular, that the effect of crude oil price changes on exchange rate volatility in the long-run is negative and statistically significant.

This paper extends these previous studies by utilizing a trivariate model to investigate the interrelationships among oil price, exchange rate, and implied volatility. Further, the use of the ARDL bounds testing approach provides a more robust empirical methodology owing to the inclusion of a volatility metric. Similar to Ibrahim et al (2014), this study uses the bilateral US dollar-euro exchange rate, as opposed to a currency index. Unlike the more restricted oil volatility metric in Agbeyegbe's (2015) study, this paper uses the CBOE volatility index, VIX. This metric captures the implied volatility attributed to the broad equity market. By using a trivariate model, this study provides a unique opportunity to examine how implied volatility, a key measure of investor anxiety, plays a role in the pricing of crude oil, which remains the most widely traded global commodity.

DATA AND METHODOLOGY

To examine the dynamic linkages among oil price, exchange rate, and implied volatility, this study used weekly data from 2010 to 2016. This yielded a total sample of 338 observations. This post 2008 Financial Crisis period is when, according to studies such as Beckman et al (2016), the inverse relationship between oil price and US dollar became particularly acute. Similar in style to Jahan-Parvar and Mohammadi (2011) but with oil price as the target variable, the following vector autoregressive (VAR) model in logarithmic form was initially specified:
All variables are expressed in natural logarithmic form similar to Jahan-Parvar and Mohammadi (2011) and Basneta and Upadhyaya (2015).

$$\ell nOP_t = \lambda_0 + \sum_{i=1}^{m} \lambda_{1i} \ell nOP_{t-i} + \sum_{i=0}^{n} \lambda_{2i} \ell nER_{t-i} + \sum_{i=0}^{p} \lambda_{3i} \ell nIV_{t-i} + \varepsilon_t \qquad (1)$$

where

OP = One-month crude oil futures contract price; ER = Nominal effective bilateral US dollar exchange rate, expressed in euros per $1; and IV = Chicago Board Options Exchange (CBOE) volatility index, more commonly known as VIX. Crude oil futures prices are for the West Texas Intermediate (WTI) trading on the New York Mercantile Exchange. The WTI futures contract is the most actively traded commodity in the energy sector. The settlement data for different maturities are retrieved from the US Energy Information Administration (EIA) database. Nominal exchange rates are obtained from Oanda. The volatility index, VIX, is compiled by the CBOE and is the implied volatility on near-term options written on the broad U.S. stock index. The innovation term, ε_t, is assumed to be iid. All variables are calculated as logarithmic changes.

As it turns out, when a mix of I(0) and I(1) time series are being examined for cointegration, the conventional Johansen test is inappropriate for detecting cointegration vectors. In such instances, Pesaran and Shin (1999) and Pesaran *et al*. (2001) recommend the autoregressive distributed lags (ARDL) bounds testing approach to investigate the long-run dynamics of the variables. The ARDL model offers two distinct benefits. First, it involves just a single equation specification, making it simple to implement and interpret. Second, different variables can be assigned different lag-lengths as they enter the model. For this reason, and given the observed differences in the stationarity levels of the variables used in this study, the ARDL model, with the following specification, is utilized:

AN ARDL MODEL

$$\Delta \ell n(OP_t) = \lambda_0 + \sum_{i=1}^{m} \lambda_{1i} \Delta \ell n(OP_{t-i}) + \sum_{i=0}^{n} \lambda_{2i} \Delta \ell n(ER_{t-i}) + \sum_{i=0}^{p} \lambda_{3i} \Delta \ell n(IV_{t-i}) + \phi_1 \ell n(OP_{t-1}) + \phi_2 \ell n(ER_{t-1}) + \phi_3 \ell n(IV_{t-1}) + \mu_t \quad (2)$$

where, in addition to the variables already defined, Δ is the first difference operator and μ_t is a random disturbance term assumed to be white noise. The short-run coefficients in the ARDL model are λ_{1i}, λ_{2i}, and λ_{3i}. The long-run coefficients, the novelty in the ARDL model, are φ_1, φ_2, and φ_3. Equation (2) may be considered a variant of the error correction model (ECM), a case in which we include the same lagged levels but without restricting their coefficients. A key assumption in the ARDL Bounds Testing method is that the errors of the model must be serially independent, a requirement that also influences the choice of the maximum lags for the specified variables. After estimating the ARDL model, we proceed to perform a *bounds test*, which is a joint F-test of the following null hypothesis:

H_0: $\varphi_1 = \varphi_2 = \varphi_3 = 0$

A rejection of this hypothesis means that a long-run equilibrium relationship exists among the three variables. Unfortunately, the exact critical values for this F-test are not available for an arbitrary mix of I(0) and I(1) variables. However, Pesaran *et al* (2001) provide bounds on the critical values for the asymptotic distribution of the F-statistic. If the computed F-statistic falls below the lower bound, we conclude the variables are I(0) and therefore do not have a long-run relationship. If, on the other hand, the calculated F value exceeds the upper bound, it means the variables are cointegrated and therefore have a long run equilibrium relationship. Values of the F-statistic that fall between the upper and lower bounds lead to an indeterminate conclusion.

If the *bounds test* leads to the conclusion that a long-run relationship exists, we can then proceed and estimate the following long-run *levels model* and obtain the residuals:

$$\ell n(OP_t) = \alpha_0 + \alpha_1 \ell n(ER_t) + \alpha_2 \ell n(IV_t) + \nu_t \quad (3)$$

With the residuals from Equation (3), we proceed to estimate the following familiar error correction model (ECM):

$$\Delta \ell nOP_t = \delta_0 + \sum_{i=1}^{m} \delta_{1i} \Delta \ell nOP_{t-i} + \sum_{i=1}^{m} \delta_{2i} \Delta \ell nER_{t-i} + \delta_3 ECT_{t-1} + \omega_t, \quad (4)$$

where ω is a white noise Gaussian error term and ECT_{t-1} is the error correction term derived from Equation (3) as the long-run levels model residuals, and is estimated as:

$$ECT_{t-1} = \ell n(OP_{t-1}) - \hat{\alpha}_0 - \hat{\alpha}_1 \ell n(ER_{t-1}) - \hat{\alpha}_2 \ell n(IV_{t-1}) \quad (5)$$

The ECT is the speed of adjustment toward long-run equilibrium. With the coefficient estimates for ER and IV from the ECM, we can also measure the short-run dynamics as well as the long-run equilibrating relationship in the sense of Granger (1988).

Like the VECM, ARDL is a restricted VAR. But unlike the VECM which requires all the series to be I(1), ARDL is performed on a mix of I(1) and I(0) series, but not I(2). For this reason, Pesaran et al. (2001) describe ARDL as a form of *unrestricted* error correction model.

EMPIRICAL RESULTS

The summary of the empirical results begins with Table 2, which shows the descriptive statistics of the three variables in this study. Unlike the evidence presented by Novotny (2012) for the 1994-2010 period, both exchange

rate and oil price now have a negative kurtosis. Also, oil price is negatively skewed, meaning that the mass of its distribution is concentrated on the right.

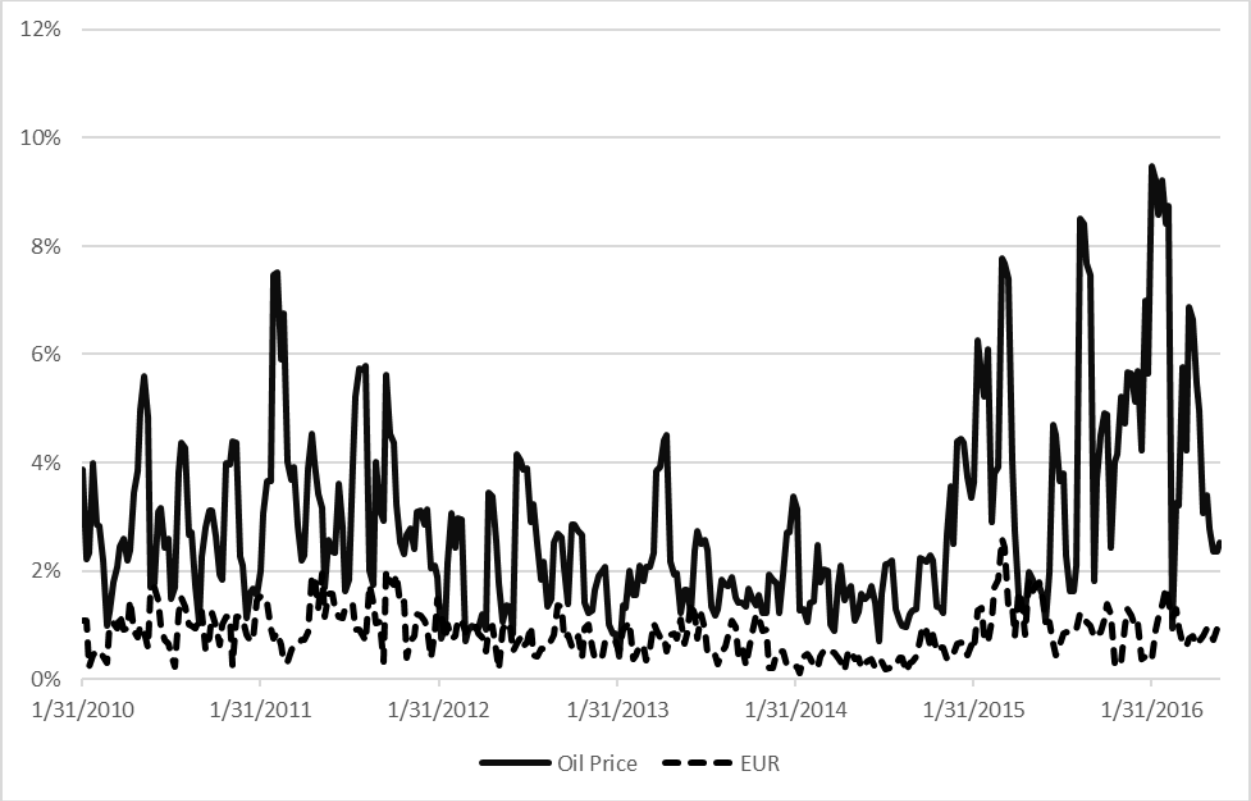
Table 2. Descriptive Statistics of the Variables (2010 – 2016)

	Oil	EUR	VIX
Mean	81.48	0.79	18.10
Median	88.60	0.76	16.56
Mode	96.71	0.77	12.46
Standard Deviation	21.84	0.07	6.02
Kurtosis	-0.50	-0.55	3.36
Skewness	-0.87	0.83	1.73
Minimum	28.15	0.68	10.32
Maximum	112.81	0.94	43.05

Oil = Nominal price per barrel of the West Texas Intermediate crude, EUR = Euros per 1USD, VIX = CBOE implied options volatility

The efficiency of the crude oil futures market is compared to that of the foreign exchange market in Figure 3. The graphs show the four-week moving standard deviations of the two series between 2010 and 2016. Undoubtedly, the forex market exhibits far greater efficiency by its ability to both maintain a lower level of volatility and far less volatility persistence than the commodities market. During this period, the average volatility of the crude oil market is about three and half times the size of that of the forex market.

Figure 3. Four-week Moving Standard Deviation of Weekly FX and Oil Price (2010 – 2016)



Földvári and van Leeuwen (2011) have shown that reduced price volatility corresponds with increased market efficiency. In this sense, they explain that volatility reflects how markets react to unexpected events and can as a result be viewed as a measure of market efficiency.

AN ARDL MODEL

To determine if unrestricted or some form of restricted VAR is appropriate for the empirical data, a unit root test is first performed. The results, presented in Table 3, show that while oil price and exchange rate are I(1), implied volatility is I(0). Upon this finding, we proceed with the ARDL bounds testing model. This model was also employed by Yilmaz and Altay (2016) in their examination of the dynamics between oil price and exchange rate volatility.

Table 3. Phillips-Perron Unit Root Test Results

	Level		1st Difference	
	t-statistic	**p-value**	**t-statistic**	**p-value**
OP	-0.9879	0.7584	-14.7146***	0.0000
ER	-1.3652	0.5996	-12.1934***	0.0000
IV	-4.7149***	0.0001	NA	NA

OP = Nominal oil price per barrel of WTI crude, ER = Exchange rate (euros per 1 USD), IV = Implied volatility.
H_0: Series has unit root (non-stationary). Series assumption: Drift but no trend.
* Significant at 10% level; ** Significant at 5% level; *** Significant at 1% level.
H_0 is not rejected at level but rejected after 1st differencing for oil price and FX. H_0 is reject for IV at level

The estimated equation for the ARDL specification, with a maximum of two lags, yields the results presented in Table 4.

Table 4. ARDL Model Results

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	-0.0008	0.00193	-0.4342	0.6645
D(OIL(-1))	-0.0677	0.075388	-0.8974	0.3702
D(OIL(-2))	-0.0734	0.056946	-1.2881	0.1986
D(EUR(-1))	0.1108	0.237204	0.4673	0.6406
D(EUR(-2))	-0.0208	0.206362	-0.1009	0.9197
D(VIX(-1))	-0.0371	0.022657	-1.6377	0.1025
D(VIX(-2))	-0.0237	0.01383	-1.7169	0.0870
OIL(-1): $\hat{\phi}_1$	-0.7407	0.090543	-8.1812	0.0000
EUR(-1): $\hat{\phi}_2$	-0.1732	0.282422	-0.6131	0.5402
VIX(-1): $\hat{\phi}_3$	-0.0035	0.028848	-0.1198	0.9048
F-statistic	25.4513***			
P-value	0.0000			

* Significant at 10% level; ** Significant at 5% level; *** Significant at 1% level.

D(OIL) C D(OIL(-1)) D(OIL(-2)) D(EUR(-1)) D(EUR(-2)) D(VIX(-1)) D(VIX(-2)) OIL(-1) EUR(-1) VIX(-1)

$$\Delta\ell n(OP_t) = \lambda_0 + \sum_{i=1}^{2}\lambda_{1i}\Delta\ell n(OP_{t-i}) + \sum_{i=1}^{2}\lambda_{2i}\Delta\ell n(ER_{t-i}) + \sum_{i=1}^{2}\lambda_{3i}\Delta\ell n(IV_{t-i}) + \hat{\phi}_1\ell n(OP_{t-1}) + \hat{\phi}_2\ell n(ER_{t-1}) + \hat{\phi}_3\ell n(IV_{t-1})$$

The long run coefficients are the values of $\hat{\phi}_1$, $\hat{\phi}_2$, and $\hat{\phi}_3$. The overall model utility, according to the F value, is statistically significant at any conventional level.

A key assumption for the ARDL Bounds Testing approach is that the errors of the estimation model must be serially independent and model, dynamically stable. Diagnostic tests confirm that the model is not serially correlated and is also dynamically stable. Tests of serial correlation was conducted using the Breusch-Godfrey LM test while the CUSUM test was used to ascertain the stability of the model. On the basis of the desirable outcomes of these diagnostic tests, we proceed with the estimation of the long-run equilibrium relations among the variables. To do this, we perform the following joint test of the long-run coefficients in the ARDL model:

H_0: $\varphi_1 = \varphi_2 = \varphi_3 = 0$

These are the coefficients of OP_{t-1}, ER_{t-1}, and IV_{t-1}. From Table 4, we find the coefficient estimates to be -0.7407, -0.1732, and -0.0035, respectively. The Wald Test for the coefficient diagnostics yielded an F statistic of 27.19 (shown below).

Wald Test Result of the Joint Test of the Long Run Coefficients

Test Statistic	Value	df	P-value
F-statistic	27.1903	(3, 324)	0.0000
Chi-square	81.5708	3	0.0000

Since the exact critical values for the F-test are not available for combinations of I(0) and I(1) variables, we rely on the bounds test of Pesaran and Pesaran (1997, p. 478), which provide bounds of the critical values for the asymptotic distribution of the F-statistic. With unrestricted intercept and no trend, the lower and upper bound critical values for 2 regressors, at the 5 percent significance level, are [3.793 , 4.855]. Since the calculated F value of 27.19 exceeds the upper bound critical value of 4.855, we reject the null hypothesis and conclude that we have a long-run equilibrium relationship among the three variables combined.

Buoyed by this finding, we proceed to investigate both the long-run and short-run causality among the variables. With the residuals obtained from the long-run model, the error correction model (ECM) is estimated. The results of the estimated short-run coefficients and the error correction term (ECT) are presented in Table 5.

Table 5. Error Correction Model Results with Oil Price as Target Variable

Variable	Coefficient	Std. Error	t-Statistic	P-value
Constant	0.0001	0.001924	0.049283	0.9607
D(OIL(-1))	-0.0468	0.074964	-0.62366	0.5333
D(OIL(-2))	-0.0685	0.056935	-1.20369	0.2296
D(EUR(-1))	0.3599	0.172912	2.081192	0.0382
D(EUR(-2))	0.1457	0.172872	0.842768	0.4000
D(VIX(-1))	-0.0077	0.011431	-0.67722	0.4987
D(VIX(-2))	-0.0112	0.010787	-1.04282	0.2978
ECT(-1) ***	-0.7779	0.088824	-8.75748	0.0000

* Significant at 10% level; ** Significant at 5% level; *** Significant at 1% level.

The speed of adjustment is given by the coefficient of the error correction term (ECT), -0.78. We find that the ECT has the desired (negative) sign and is statistically significant. When this coefficient is negative and significant, the effect on the target variable (in this case, oil price), is positive. This coefficient is the speed of adjustment to long-run equilibrium and indicates that about 78 percent of departures from long-run equilibrium is corrected each period.

The test of serial correlation on the ECM is based on the Breusch-Godfrey Serial Correlation LM Test. The null hypothesis of no serial correlation could not be rejected because the chi-square p-value is 0.2713. The model is also confirmed to be dynamically stable based on the CUSUM test.

Long-run Granger causality results are summarized in Table 6. These results are extracted from the long run equation in which each of the three variables is specified as the target variable in a separate estimation. We find that in the long run, there is a bidirectional causality between exchange rate and oil price and also between implied volatility and oil price. These results suggest that expected market shocks are a factor influencing the inverse relationship between oil price and US dollar. This is because we find no evidence of a long run causality between implied volatility and exchange rate. The results show that a 1 percent increase in the value of the dollar causes oil price to fall by about 0.7 percent in the long run. Similarly, a 1 percent increase in the value of crude oil causes the dollar to fall by 0.06 percent. The negative sign of the coefficients points to the inverse correlation between the two variables. These results are consistent with the findings by Yilmaz and Altay (2016) with exchange rate volatility as the risk metric.

The negative sign in the long run causality between implied volatility and oil price is initially somewhat counterintuitive. Rising investor fear, one would think, is probably reflective of growing concerns about future oil supply disruptions and therefore rising oil prices. This is often the case with the type of geopolitical risks arising from the oil-rich Middle East region. However, oftentimes, investor foreboding is associated with expectations of declining global economy and with that, falling commodity prices.

Table 6. Long-Run Granger Causality

Null Hypothesis +	Coefficient	P-value	Decision
ER does not Granger-cause oil price	-0.7068***	0.0001	Reject H_0
Oil price does not Granger cause ER	-0.0612***	0.0001	Reject H_0
IV does not Granger-cause oil price	-0.0595***	0.0000	Reject H_0
Oil price does not Granger cause IV	-1.0972***	0.0000	Reject H_0
IV does not Granger-cause ER	-0.0002	0.9475	Do not reject H_0
ER does not Granger cause IV	-0.0527	0.9475	Do not reject H_0

* Significant at 10% level; ** Significant at 5% level; *** Significant at 1% level.
Oil = Nominal price per barrel of WTI crude, ER = Euros per USD, IV = CBOE option volatility, VIX.
+ Null hypothesis is tested at $\alpha = 0.01$.

Table 7 shows the results of short-run Granger causality. The p-values are for the Wald test statistic which is asymptotically chi-square. There is evidence that oil price Granger-causes both exchange rate and implied volatility in the short-run, without a reverse causality. This suggests that in the short run, oil shocks affect the valuation of the US dollar, perhaps in large part due to the ubiquitous use of petroleum as both a key industrial commodity and a main source of export earnings for most major petroleum producers. Perhaps also for the same reason, we find that oil price affects volatility, an index that is widely regarded as the investor fear gauge. The geo-politics that often go with the supply of crude oil, largely on account of issues related to OPEC, has often proved instrumental in oil market volatility.

Table 7. Short-Run Granger Causality

Null Hypothesis	P-value	Decision *
ER does not Granger-cause oil price	0.1064	Do not reject H_0
Oil price does not Granger cause ER	0.0169 **	Reject H_0
IV does not Granger-cause oil price	0.5803	Do not reject H_0
Oil price does not Granger cause IV	0.0000 ***	Reject H_0
IV does not Granger-cause ER	0.2599	Do not reject H_0
ER does not Granger cause IV	0.0843*	Do not reject H_0

* Significant at 10% level; ** Significant at 5% level; *** Significant at 1% level.
Oil = Nominal price per barrel of WTI crude, ER = Euros per USD, IV = CBOE option volatility, VIX.

CONCLUSIONS

Using the recently developed autoregressive distributed lags (ARDL) model *a la* Pesaran *et al* (2001), this study examined the impact of implied volatility on the inverse relationship between oil price and US dollar exchange rate. The empirical data were obtained from the six-year period following the end of the Great Recession in the United States in 2010. Implied volatility is included in the trivariate model to ascertain if investor foreboding in the pricing of derivatives is instrumental in the oil-dollar dynamic. We find the three series to be cointegrated.

In the long run, we find evidence of a bidirectional but negative causality between exchange rate and oil price and also, between implied volatility and oil price. There is no evidence of long run causality between implied volatility and exchange rate. These results allow us to conclude that the oil-dollar inverse relationship is largely on account of expected market uncertainty, reflected by implied volatility; the intuition being that investor pessimism about the global economy is, as is often the case, associated with falling commodity prices.

In the short run, we find only a one-way causality from oil price to exchange rate and from oil price to implied volatility. This appears to suggest that oil shocks affect the dollar valuation perhaps on account of the ubiquitous use of petroleum as both a key industrial commodity and a main source of export earnings for many oil producing economies. This outcome is underscored by the fact that oil price is denominated in US dollars. Perhaps also for the same reason, oil shocks are a key factor explaining investor pessimism, as conveyed by implied volatility.

Overall, this study has demonstrated that in addition to exchange rates, investor anxiety plays a role in the valuation of oil especially in the long run. This dynamic adds to the fact that the US dollar is the denominating currency for most global commodities. Consequently, when crude oil prices fall, the reduced dollar revenues for non-dollarized oil-producing economies are at least partly offset by the rise in the purchasing power of the dollar.

Another important finding of this study is that the direction of short run causality between oil price and exchange rate appears to have changed. Contrary to findings in previous studies, we find that causality now runs from oil price to exchange rate in the years since the end of the 2008 Global Financial Crisis. As Novotny (2012) contends, this dynamic points to the growing role of petroleum as an alternative investment asset, especially in periods of excess liquidity and low interest rates. Also, given the observed inverse relationship among all three variables, there is the potential benefit of risk diversification and as Ibrahim et al (2014) have suggested, inflation targeting.

POLICY IMPLICATIONS

There are arguably profound policy implications suggested by the findings of this study. First, given the direct impact of implied volatility in the pricing of petroleum, the need for a stable energy policy could not be overemphasized. Such a policy would have focus on predictable petroleum production and distribution. In this way, variation in demand rather than supply is the key driver of oil prices. This would also assure a more efficient market for petroleum products since price distortions occasioned by uneven production levels are eliminated.

Second, given the long-run inverse correlations between oil price and the US dollar, there is good reason for oil-producing oil-dependent economies to redirect their fiscal planning to domestic resource utilization. When fiscal priorities are financed in domestic currency rather than in US dollar, declining oil prices might actually prove beneficial to the economy. This view is guided by the finding that the purchasing power of dollar receipts from oil sales tend to increase during periods of declining oil price.

Third, weaning an oil-producing economy from disproportionately relying on oil revenues avoids making that country a victim of the so-called *Dutch disease*. Besides the negative consequence on the country's currency where competing goods are shut out, this phenomenon also causes a rapid decline in other sectors of the economy, leaving the country vulnerable during falling oil prices. The evidence of this was visible after 2010 in the oil-dependent economies like Saudi Arabia, Nigeria, Angola, and also Russia. These countries fell into a recession that lasted, in some cases, longer than five years. In the absence of any other major goods, they were unable to take advantage of their devalued currencies. Also, with the lopsided reliance on petroleum, they had no other means to boost their fiscal revenues as oil prices fell.

Finally, the bidirectional long-run causality between volatility and oil price also means that a lopsided reliance on oil would make for an unstable revenue stream for any country. Even if oil production stayed at reasonable levels, heavy price fluctuations would naturally result in a budget nightmare for countries that rely primarily on oil revenue. This implication reinforces the wisdom for oil producing economies to diversify away from the single product.

In all, oil dependency leaves a country's economy too centralized and makes fiscal revenue more uncertain. As a result, the country's economy is more susceptible to the myriad geo-political risks that are associated with

petroleum production and pricing. The reverse is an economy that is not only well diversified but one that is much more suited to weather economic downturns.

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RECIPROCITY OR TRADING PARTNER EXPLOITATION: THE INTENT VERSUS THE REALITY OF GLOBALIZATION, A QUANTITATIVE ANALYSIS

Robert G. Vambery

ABSTRACT

This paper examines a leading paradox in globalization which international marketers are forced to face. It scrutinizes large imbalances in macro-marketing access during globalization. For the case of the United States, huge and persistent trade deficits have been caused in part by unbalanced flows of products and commodities between the United States and Japan and the United States and China. The following study attempts to develop a quantitative indicator and a measure of whether these imbalances are the results of intentionally created deficits and of deliberate programs for exploiting trading partners. Moreover, the paper seeks to look into the simultaneous practice of globalization and mercantilism. The study uses large data sets involving the international trade of the United States with 12 of its leading trading partners over a 10-year period. Then the study and the associated analyses are repeated for a subsequent 10-year period. The mathematical formula created to serve as a metric for the analyses is called "coefficient of trading partner exploitation". Then the attempt is made to quantify whether persistent trade imbalances are the results of deliberate and selfish if not mal-intentioned trade policies. In contrasting theories of mercantilism with the free trade concepts of globalization and by conducting quantitative analyses of US trade with its leading trading partners over twenty years, the paper leads toward the conclusion that the simultaneous practice of globalization and mercantilism is a winning formula in international business for countries that are able to implement it, whether with the approval by or over the opposition of their trading partners.

Keywords: Globalization, mercantilism, trade balance, exploitation, reciprocity, national wealth

INTRODUCTION

Practitioners and analysts of international business give much attention to U.S. balance of trade statistics such as those involving Japan and China as well as to statistics about the total international trade performance of the US, because all three are perpetually in significant deficit.

The United States has been and continues to be referred to commonly as the richest country in the world. Yet, how rich is the country is open to a variety of interpretations. Though the US has the biggest economy measured in terms of the dollar value of its GDP, it is far from and has not had for many years top ranking by the criterion of per capita income.

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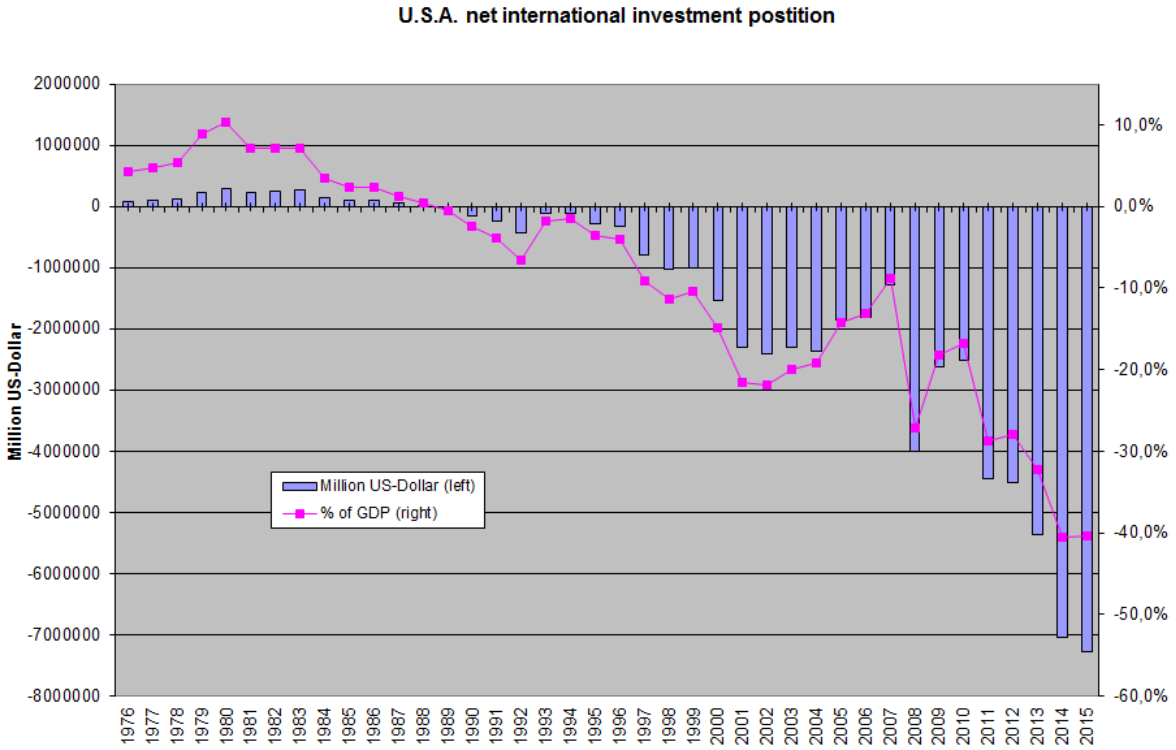
How rich is America? It seems that when measuring America's wealth, there is a tendency to use "single entry book-keeping": the dollar values of the nation's assets are summed up but then there is a reluctance or failure to subtract from that sum the dollar value of the nation's debts and liabilities.

One relevant indicator of America's changing wealth position in the world looks at the net investment position of the country over time. Namely, what is the dollar value of the assets US interests owned outside of the country minus the dollar value of the assets owned inside the United States by foreign entities?

This study uses large data sets involving the international trade of the United States with 12 of its leading trading partners over a 10-year period. Then the study and the associated analyses are repeated for a subsequent 10-year period. The mathematical formula used is called "coefficient of trading partner exploitation". Attempt is made to quantify whether persistent trade imbalances are the results of deliberate and selfish if not mal-intentioned trade policies.



Source: US Bureau of Economic Analysis

The above diagram depicts the changing net international investment position of the United States. It presents cause for serious concern as it shows that the net asset position of the Unites States in the world declined from a positive $1.0 trillion in 1980 to a negative $7.5 trillion by 2015 and continues to worsen through 2018.

The resulting evidence obtained in this study indicate that in a globalized trading environment in which countries are supposed to have opened up to foreign suppliers, in practice, what is observed is much one way rather than reciprocal globalization.

FROM MERCANTILISM TO GLOBALIZATION

It could be proposed that movement away from the severe protectionism of mercantilism was initiated by Adam Smith's theory of absolute advantage that proposed that greater total wealth can be created if instead of

relying on protectionist measures, nations become open to free trade and base competition on production efficiency. According to Mayer and Vambery (2008) nations would specialize in the production for themselves and for exportation those goods that they can create using the fewest units of the factors of production. Yet Adam Smith's model left the world with the well-known challenge: What will be the fate of the many countries that are not the most efficient producers of any product? They could then still be successful importers but at the same time also be failures as exporters. They would become impoverished rather than be enriched through international trade.

David Ricardo's theory of comparative advantage reaffirmed the desirability of what much later came to be called the movement toward globalization. Free trade could generate greater total wealth for the world than mercantilist protectionism. International competition would still be based on production efficiency:

Countries that are most efficient in producing certain products (i.e. have absolute advantage) would continue to specialize in making those products. However, countries with no absolute advantage would examine their production efficiencies comparatively or relative to the efficiencies of other country producers. They would then specialize in the production and exportation of those goods in which their production efficiency disadvantages were the smallest.

The academic literature contains many works (Griswold, 2007) pointing to the limited real world applicability of the theory of absolute advantage and the theory of comparative advantage, especially because of assumptions implicit in those models. Yet, the two theories' propositions that largely free trade can generate greater total output and wealth than can largely protectionist trade are widely accepted. These two theories are the fundamental bases for the "freer trade" attitudes, policies and negotiations pursued since the creation of the original General Agreement on Trade and Tariffs (GATT), now known as the World Trade Organization (WTO).

Globalization recognizes changes in the world economy and in relations among nations. It calls for the removal of barriers to many interactions among nations and peoples. It predicts and points to greater growth. It promotes far-reaching openness and the removal of barriers to many interactions among nations and peoples.

The work of Theodor Levitt (1983) popularized the desirability and even the necessity of globalization by focusing on the possibilities of creating global products for globalized markets. This reduced product development costs, added to economies of scale and facilitated the homogenization of marketing and production. The world having gotten used to much globalization in production and marketing, then increased the globalization of finance in which funds could be moved more easily across national borders from centers where funds were present in great quantities to centers of capital scarcity where higher incomes and capital gains could be earned. To significant extents, even human resources became globalized with both skilled and unskilled workers and creatively talented people moving across national borders and among continents for more productive uses of their abilities and for greater personal benefits.

ECONOMIC POWER VERSUS INTERNATIONAL BUSINESS WEAKNESS

For many years the United States of America has been variously referred to as the world's richest and most powerful nation, one of the most competitive economies, the biggest source of technological innovation, the leading driver of global economic growth, the only super power at the start of the twenty-first century. (Johnson, 1968)

Yet in the field of international trade the United States is a perpetual loser. While many years ago the country had a positive net international asset position of over one thousand five hundred billion dollars, today it has a net negative international asset position of over five thousand five hundred billion dollars. Through its trade deficits the United Sates is now losing about six hundred billion dollars per year to foreign asset holders, be they individuals, corporations, foreign governments or supranational institutions (U.S. Department of Commerce Bureau of Economic Analysis, 2014).

By the latest years of the Clinton Administration in 1992-2000, (US Trade Deficit Review Commission,

2014) and continuing into all the years of the younger President Bush Administration, in 2001-2008, the entire annual economic growth of the United States and more was lost to other countries through excessive purchases of foreign made goods and services or through a perpetual failure to sell significantly larger quantities of U.S. made products and services to foreign customers (Atkinson, 2012). Prior to the great recession, the U.S. GDP was growing annually by about five hundred billion dollars; but then in the recent post-recession period, that growth amount reached only about three hundred billion dollars annually. That is significantly smaller than the current yearly U.S. trade deficit. "Table One" shows the long-term nature of this situation, which continues to worsen year after year. Much of this shortfall arises from chronic deficits with a limited number of major bilateral trading partners. For the U.S., (Bagnai, 2005) the deficit has been above all with Japan and West Germany during most years of the 1970s and 1980s.

Since the second half of the 1990's China emerged as the nation imposing the greatest single component of the U.S. trade deficit. The problem (if it is a problem) with Japan has diminished a bit in some years but it remains substantial (Farnsworth, 2011). Yet it attracts less attention because

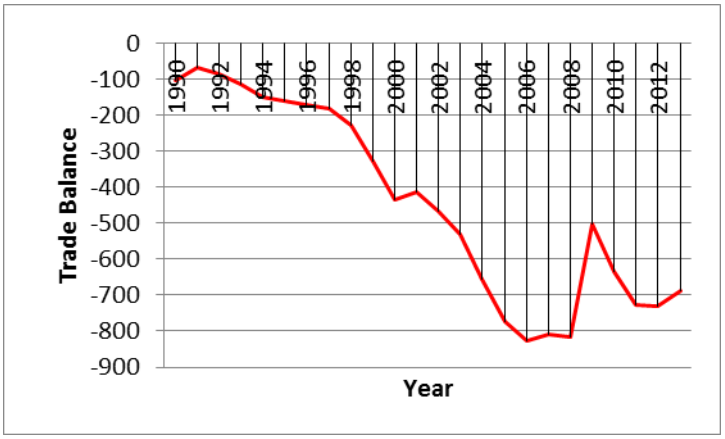
(1) the Chinese surplus at the expense of the U.S. is so huge,
(2) the Chinese surplus developed with spectacular speed,
(3) many U.S. observers felt sympathy for Japan during its decade-long economic stagnation (which is not really a deep recession – as GDP/year and GDP/person remained relatively constant) and
(4) the Japanese government's expressions of loyal friendship with the U.S. on international, political and military matters curtailed the concern about a less than optimally functioning bilateral trade relationship.

It is noteworthy that during the past decade big, new and chronic trade deficits developed with several other partners with whom in the past the U.S. had trade surpluses (e.g. Mexico) or with whom the **deficits used to be small (e.g. Canada).**

Table 1
U.S. Merchandise Trade Balance with the World
(In billion dollars)

Year	Balance	Year	Balance
1990	-102	2004	-655
1991	-67	2005	-772
1992	-84	2006	-828
1993	-116	2007	-809
1994	-151	2008	-816
1995	-159	2009	-504
1996	-170	2010	-635
1997	-181	2011	-728
1998	-230	2012	-730
1999	-329	2013	-689
2000	-436	2014	-735
2001	-412	2015	-746
2002	-468	2016	-677
2003	-532	2017	-721

Figure 1.
U.S. Merchandise Trade Balance with the World
(In billion dollars)



Note: During many of these years, the U.S. had annual surpluses on services accounts of about $65 billion to $150 billion.
Source: US Census Bureau website 2014, 2017: http://www.census.gov/foreign-trade/balance/index.html

Still, the presence of big trade deficits by itself is not a completely satisfactory identifier of a "problem trade relationship". For example, if a hypothetical crude oil producing country with a population of only three million persons could export three million barrels of oil per day to the United States, it would have a very large trade surplus, which could be beyond remedy. (Woo, 2010) It would become a holder of vast quantities of dollars; it could hold the dollars in cash (unlikely) or in dollar denominated financial instruments, or acquire vast quantities of real assets inside or outside the U.S. Nonetheless, the huge deficit might not be contrary to U.S. economic interests in the short or intermediate term, because the U.S. may want and need the oil, irrespective of the virtual impossibility of balancing imports with exports to the hypothetical trading partner.

GLOBALIZATION IN CONCEPTS VERSUS IN REALITY

The concept of globalization, especially as it applies to business was popularized in 1983 by Arthur Levitt's classical article in the Harvard Business Review entitled "The Globalization of Markets". More so than arguing in favor of free trade, Levitt argued in favor of restaging production and marketing strategies in both domestic and international business toward standardization of products and marketing methods so as to achieve economies of scale. The goal pursued was reduction of costs that would enable the implementation of price reductions. With lower prices, demand would increase and sales volumes would grow further. The resulting rising profits and larger volumes of lower price products would become beneficial both for corporations and for consumers.

About twenty years later, two major studies addressed the issue of the desirability and success of globalization versus its adverse impacts and failures. In 2002, Joseph Stiglitz published his critique of the issue in his book entitled "Globalization and Its Discontents". In a work that maybe viewed as a rejoinder, in 2004, Jagdish Bhagwati published his analysis of the contributions of globalization to the world economy.

In 2017, Joseph Stiglitz released his updated interpretation and evaluation of the processes and impacts of globalization through the present.

Levitt's concepts and recommendations promised economic growth for those companies and countries that implemented his guidelines. However, though Stiglitz recognized the many development-enhancing impacts of globalization but also focused on its harmful impacts on various groups and the failure of globalization to bring significant benefits to quite many countries.

Bhagwati countered by emphasizing many of the enormous economic growth stimulating impacts of globalization and also recognized that many countries did not receive its major benefits in part, because they were not involved sufficiently in the globalization process either directly or through the spill-over effects of the activities of other countries.

It is often assumed that as an important originator of globalization, the United States is one of its leading beneficiary (Chakravarty, 2017). Concurrently, having achieved remarkable economic growth partially through its participation in globalization, China is the other leading beneficiary from globalization.

China's radical growth in wealth and perhaps even more importantly the radical reduction in poverty in the Country, make naming it a big winner from globalization an almost obvious selection.

A major outcome of globalization for the United States became a higher standard of living made possible by the importation of products and services at favorable prices and by the ability to carry out the purchases despite ballooning trade deficits. However, America's accumulation of a colossal national debt complemented by far larger unfunded debt obligations, all of them denominated in hard currency, is often not taken into account sufficiently

It has been claimed that the US exhibits a degree of financial irresponsibility by nearly always spending more than it earns in international trade. While this observation does have considerable merit, the work of Ganziro and Vambery (2016) entitled "The Exorbitant Burden: The Impact of the U.S. Dollar's Reserve and Global Currency Status on the U.S. Twin-Deficits" demonstrates that the reserve currency role of the Dollar causes and imposes large burdens on the Nation in forms of balance of trade and budget deficits.

It could be proposed that movement away from the severe protectionism of mercantilism was inspired by Adam Smith's theory of absolute advantage. It proposed that greater total wealth can be created if instead of relying on protectionist measures, nations become open to free trade and base competition on production efficiency. Then nations would specialize in the production for themselves and for exportation of those goods that they can create using the fewest units of the factors of production.

Yet Adam Smith's model left the world with a well-known challenge: What will be the fate of the many countries that are not the most efficient producers of any product? They could then still be successful importers but failures of exporters. They would become impoverished rather than enriched through international trade.

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LITERATURE REVIEW

Three major works from the twenty-first century addressed the pro and con issues of globalization and of the impacts of trade deficits that emerged during the decades of accelerated globalization.

Given the potential gains from globalization promised by the pioneering work of Theodore Levitt, Joseph Stiglitz presented his interpretations and to a degree his disappointments in globalization in his volume published in 2002 entitled "Globalization and its Discontents". In 2017-2018, he released his interpretation of the impacts of globalization during the next 15 years and into the present in the revised and updated volume entitled "Globalization and Its Discontents Revisited: Anti-Globalization in the Era of Trump".

Somewhat with the intention of countering the unfavorable evaluations of the impacts of globalization, Jagdish Bhagwati published his tome in 2004 entitled "In Defense of Globalization".

The work that examined the interactions of globalization, of the reserve currency the US dollar, and of the evolution of substantial and lasting trade deficits was published in 2016 by Taranza Ganziro and Robert Vambery in their book "The Exorbitant Burden: The Impact of the U.S. Dollar's Reserve and Global Currency Status on the U.S. Twin-Deficits".

Globalization Adversities

The globalization issues of greatest concerns to the author do not deal with the constructive accomplishments of globalization. Rather his interests are in the shortfalls between the high hopes promulgated by Levitt's prescriptions for a globalized world and the reality in which many benefited greatly while many others were left behind.

Globalization was supposed to benefit virtually all countries and their citizens even if not to the same extent. Instead, in the course of globalization, businesses, governments, and even international institutions such as the IMF, put the interests of Wall Street and the financial community ahead of those of the developing nations.

In many countries, large segments of the population benefited from moving up on the economic ladder. Yet even in those countries, significant sectors and very large numbers of workers were subjected to losses of careers and of incomes as a result of globalization-induced redistribution of production and trade. These unfavorable outcomes then sparked the birth of both rational and violent movements against globalization.

Stiglitz (2002, 2018) identified areas of globalization-endorsed changes from which developing nations were free to choose. However, some of these choices eventually served outsider interests more effectively than the countries that were trying to accelerate their social, financial and overall economic developments.

Among others, these included:

(1) Liberalization of the financial system from government interference.
(2) Allowing access and inviting in foreign investments.
(3) Choosing priorities for the implementation of reforms and of development projects.
(4) Seeking the benefits of trickle-down economics.
(5) Consulting international advisory institutions about strategies.

Though his analyses are biased in favor of finding shortcomings and failures, Stiglitz provides adequate evidence to support his criticisms and to point to the limitations of what was or can be achieved through globalization.

Globalization Successes

In the book, "In Defense of Globalization", Bhagwati takes a four-pronged approach as he addresses the issue of economic globalization.

First, he posits a definition for economics oriented globalization that is likely to cover most of its aspects and be acceptable to most of its observers:

> *Economic globalization constitutes integration of national economies into the international economy through trade, direct foreign investment (by corporations and multinationals), short-term capital flows, international flows of workers and humanity generally, and flows of technology.* (Bhagwati, 2004)

Second, he describes the many positive contributions of the globalization process but along the ways he also identifies challenges encountered such as the need for even greater reductions in poverty, the enhancement of the roles of women in the economies of the formally employed, and global pollution which is curtailed in many areas but not so in many other locations.

Thirdly, not having looked for shortcomings and failures of globalization but nonetheless having identified several major ones, he turns to a set of constructive recommendations on how to cope with remaining and at times worsening problems emerging from globalization processes.

His recommendations include (1) having to anticipate rather than waiting for the rise of difficulties, (2) creating multilateral institutions better suited to address worldwide problems, (3) creating programs and providing adjustment assistance not just for specific businesses but at times for large groups of individuals harmed by or displaced by the rearrangement and redeployment of production across national borders, (4) managing changes in global finance so that crises developing in some areas do not spread to the entire global financial system.

Fourthly, he addresses the challenge of implementing globalization at optimal rather than maximum speeds. He points to the danger that the recognition of the positive potentials of globalization can also be implemented too fast, before the countries and peoples are of a predisposition and in a position to absorb, cope with and benefit from the changes.

Globalization and Trade Deficits

The issue of whether the government and the people of the United States exhibit a level of irresponsibility by always running sizable trade deficits not only with some of their leading trading partners but with the world as a whole, is addressed by Ganziro and Vambery (2016) in their work entitled "The Exorbitant Burden: The Impact of the U.S. Dollar's Reserve and Global Currency Status on the U.S. Twin-Deficits".

The book's quantitative analyses show that the superiority of the U.S. dollar and its position as the world's leading reserve currency lay in the confidence the whole world places in that financial instrument. That confidence greatly contributes to its convertibility into almost all other currencies. The dollar's use in open economies provides massive savings in transaction costs.

Since countries have to pay for the goods and services they need to buy from foreign providers, they are expected to have a supply of the currency in which most international trade transactions are conducted. Because it is the leading reserve currency, it then becomes the duty and burden of the U.S. and of the U.S. dollar to provide for the dollar-demands and dollar-needs of the rest of the world. Then the question needing an answer becomes: "Can the United States have balanced external accounts while promoting its international trade competitiveness through monetary policy and still meet the ever-increasing demands for dollars so as to facilitate the operation and growth of the global economy?"

As far back as 1960, Triffin offered "No" as an answer (Reinhart, 2017). He posited that balancing external accounts are at odds with the dollar's reserve currency status, because for the rest of the world to accumulate the designated reserve currency dollars other countries must regularly run trade surpluses against the United States. As a consequence, the United States has to allow corresponding current account deficits and the associated capital account surpluses. The trade surplus countries very often store their U.S. dollars in U.S. Treasury debt instruments. These then constitute and contribute to surpluses in the U.S. capital account and represent additions to the U.S. external debt.

Occasionally, the statement is made that "Trade deficits do no matter". However, the preceding paragraph indicates that trade deficits always matter, because they lead to contributions to capital accounts and to external debts. That is, they cause transfers of wealth. The trade deficit country experiences reductions in wealth and the

trade surplus country experiences gains in wealth. Even if the foreign acquirers leave their newly gained funds in the economic system of the deficit country, ownership shifts. “What used to be our money is now their money.”

The conclusion to be drawn at this point is that as long as the U.S. dollar is the principle reserve currency of the world economic system, the U.S. will always have to run a trade deficit of significant magnitudes in direct proportion to the combined dollar reserve currency requirements of all other countries.

A NEW TYPOLOGY FOR GLOBALIZATION AND FAIR TRADE

The academic discussions of globalization went into high gear during the 1980’s inspired by Theodore Levitt’s seminal work concerning the development of global markets and the potentials for as well as the necessity to create globally distributable products. Levitt observed that the easing of technology transfers processes, the improvements in the speed of transportation operations, the reductions in the unit costs of physical distribution, and the lowering of tariff and non-tariff barriers to trade together greatly facilitated the process of marketing products across national boundaries and over great distances. Levitt further observed similar earnings capabilities among large groups of consumers the world over, important convergences in customer preferences, and alike methods of product use which made it possible to develop highly, though not necessarily completely, standardized products. He referred to them as global products.

The ability to research, develop, produce and distribute global products for global markets enables firms to achieve radical cost savings and reach dramatic economies of scale. Somewhat aggressively, Levitt predicted (1983) that those business organizations that do not take advantage of the opportunities offered by these developments to create new global marketing strategies would lose out in the brutal and highly competitive new world of global marketing competition. (Levitt, 1983)

In the years that elapsed since Levitt popularized the term *global products*, the concept and practice of globalization has had dramatic impacts on international business activities. At the beginning of the twenty-first century, the world views globalization as a broad process of *freeing* and *opening up*. It is an opening in markets to international trade, but in which additionally (1) financial markets for both portfolio and direct investment opportunities became more accessible, allowing short and long term capital to be moved across national borders to global financial centers without significant impediments from either national or regional regulatory agencies, (2) many obstacles to information flows have been removed and the speed of data exchanges increased substantially, (3) the speed and efficiency of transportation and physical distribution have increased radically accompanied with dramatic reductions in associated unit costs, (4) technology transfers were greatly expanded and occurred more rapidly as fewer regulations impeded their flow, and (5) labor markets for more specialized talent and higher numbers of workers have been enlarged through the trans-border migration of potential workers.

The new globalized world is assumed to be one of greatly increased mobility, and also one that is characterized by *reciprocal openness*. In actuality, it may found that most countries have opened up somewhat, relative to how they were earlier in the pre-globalization era, but that some, including some enormously important ones, have engaged in what may be referred to as *one-way globalization*. This does not imply that they failed to open up to a significant degree but rather that they are benefiting from a very great degree of access to important portions of the world market without providing corresponding degrees or amounts of access to their own national markets.

Thus, a new typology is proposed to consist of the terms *one way or outward globalization*, *reciprocal or two way globalization, multilateral globalization, and universal globalization.*

One-way or outward globalization: a country may be said to be engaged in one-way globalization if it is benefiting from a very great degree of access to important portions of the world market without providing corresponding degrees or amounts of access to their own national markets.

Reciprocal or two-way globalization: two trading partners may be said to be engaged in two-way or

reciprocal globalization if they are engaged in substantial bilateral trade and if they are providing to each other balanced, open access to their respective markets.

Multilateral globalization: A series of countries may be said to be in multilateral globalization if they are involved in providing one-another similar accesses to their respective domestic markets then they may be said to be engaged in multilateral globalization.

Universal globalization: When all potential trading partners are willing and able to trade with all other potential trading partners without significant restrictions, imposed charges and preferential or prejudicial treatment by any governments or interest groups. (This may be the near utopian condition that may be cited in the mission statements of trade negotiations toward which progress may be slow.)

NATIONAL CONCERNS ABOUT GAINS FROM TRADE

A leading case of what may be identified as one-way globalization is the business relationship between Japan and the United States. Japan, once a largely closed (isolationist) nation, is now somewhat accessible to foreign producers and investors but to a radically lesser degree than the access afforded to Japan by the United States.

A second major case of by now great importance in the early years of the twenty-first century is the People's Republic of China that also exhibits signs of and practices of one-way globalization.

For decades it has been thought that the trade deficit problem had to be solved or at least substantially reduced, because foreign asset holders could not be expected to indefinitely enlarge their U.S. dollar denominated holdings of financial instruments. Back as far as during the second term of the Eisenhower Administration, the President expressed concerns about the U.S. current account deficit, the outflow of gold from the Treasury and the potential threats to the stability of the exchange value of the dollar. Nearly a decade later President Johnson found it so important and prestigious enough to show a trade surplus that the Nation's accounts receivables collections were speeded up and the Nation's payments of accounts payables were delayed so that a trade surplus and a current account surplus could be recorded (Miao and Berg, 2010).

Yet throughout the period (2004-2016), both Japanese and Chinese asset holders have increased their dollar denominated holdings far beyond what some would have expected in 1985 or 1995 and especially after the start of the great recession. Furthermore, even as we entered the second decade of the new millennium, other countries including the aforementioned Canada, are willing to finance their big surpluses through the purchase of additional quantities of U.S. dollar denominated financial instruments.

This has not been accomplished without severe repercussions:

The dollar lost two-third of its exchange value against the yen, relative to what it was toward the end of the Bretton Wood's regime (1971-1972). Moreover, significant volatility in the relationship between the euro and the dollar occurred after the euro's introduction into circulation in 2001. Starting with a value of $1.17, it declined to $0.83 only to rise to $1.60 and now fluctuates between $1.1 and $1.3 in the current recessionary and post recessionary environments in 2018.

Clearly, there are advantages and disadvantages associated with a high exchange valued U.S. dollar. Yet the power to buy goods or assets – a major source for adding to national wealth – is diminished with a reduced valued U.S. currency (Ali and Alias, 2014).

Persistent trade imbalances may develop and remain in the long-run, because of some natural imbalance such as may be the case with a large-scale producer who is simultaneously a small-scale consumer.

However, many imbalances may be the results of trade barriers, and of preferential or prejudicial predispositions toward some or many trading partners, mercantilist trade policies and practices or simply may come from the absence of a "level playing field" in trade relationships.

Back in the spring of 2004, the President of the United States Chamber of Commerce stated in a televised discussion that the Japanese market is *effectively closed* to U.S. manufactured goods – implying not just the presence of a slanted or angled playing field but virtual exclusion from the playing field. Another observer (Vambery, 2014) of the levelness or fairness of the Chinese export import playing field compared it to the Himalayas, not an outlandish metaphor given China's sometimes 4 to 1 exports to imports ratio with the U.S.

TOWARD A QUANTITATIVE MEASURE OF UNFAIR TRADE

This paper examines a leading paradox in globalization which international marketers are forced to face. It scrutinizes imbalances in macro-marketing access during globalization for the case of the United States and puts emphasis on Japan and China. (Morrison, 2015)

Imbalances in the bilateral trade relationships of the United States with its leading trading partners are identified. (Woo, 2010) A substantial surplus position is considered as a favorable imbalance while a substantial deficit position is considered to be an unfavorable imbalance. Then a new metric is developed by this paper for the purpose of making comparative measurements of the imbalances. It is given the name *Coefficient of Trade Imbalance.* It is defined as q where

$$q = \frac{\text{Exports - Imports}}{\text{Exports + Imports}}$$

$$q = \frac{E - I}{E + I},$$

where

E = exports, I=imports, and $-1 < q < 1$

The coefficient offers a reflection on the trade balance, whether positive or negative, as a proportion of total bilateral trade.

Example A:

Given**:** $q = \frac{E - I}{E + I}$

Let: E = 50 and I = 50

Then: $q = \frac{50-50}{100} = \frac{0}{100} = 0$

Example B:

Let: E = 50 and I = 0

Then: $q = \frac{50-0}{50+0} = \frac{50}{50} = 1$

Example C:

Let: E = 0 and I =50

Then: $q = \frac{0-50}{0+50} = \frac{-50}{50} = -1$

Therefore: $-1 \leq q \leq +1$

If the coefficients of trading balance appear to be such as to indicate a likelihood of unfair treatment of one or more trading partners, then it becomes desirable to scrutinize the coefficients in greater detail in order to establish the possible presence of trading partner exploitation.

The study seeks to find an indicator of whether persistent trade imbalances may be the results of purposeful national trade policies and possibly manifestations of *one-way globalization* strategies. That is, a first trading partner may be said to be exploited by a second trading partner if the first trading partner provided significant earnings opportunities to the second trading partner by allowing access to its lucrative markets without the first being allowed reciprocal access to the second partner's lucrative markets. If so, then the paper proposes to re-label the quantitative definition of *the Coefficient of Trade Imbalance* to a new, recalibrated metric to be called *"Coefficient of Trading Partner Exploitation".*

Therefore, the creation of a new measure is suggested. Again, it is to be called *Coefficient of Trading Partner Exploitation (**Q**)*, where

$$\mathbf{Q} = \frac{E-I}{E+I} * \mathbf{(100)}$$

$$\mathbf{Q = 100q}$$

and

$$\mathbf{-100 \leq Q \leq +100}$$

EMPIRICAL INDICATORS

As this study evolves, coefficients are calculated and examined for a series of bilateral trade relations of the U.S. and its leading trading partners. The quantitative evidence then can be scrutinized for a number of years.

Here sets of tables are provided which present sample time series measures of the trade relationships of the United States with some of its respective leading trading partners. First export statistics are presented, followed by corresponding import statistics. Trade balances are then calculated by subtracting imports from exports. Next, the respective *Coefficients of Trade Imbalance* are calculated using the above-mentioned formula of q = (E – I) / (E + I). Finally, the *Coefficients of Trading Partner Exploitation **Q*** are identified using the formula **Qi** = 100qi.

A HISTORICAL ANALYSIS

Table 2a

EXPORTS
Trade Between U.S. And Other Countries
(Includes Both Goods And Services)
(In Millions of $)

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Country											
Brazil	16436	17922	22319	21760	18743	15321	15879	12409	11218	13897	15345
Canada	145153	153702	172271	175759	187423	203581	187731	185743	196914	189879	211349
China	14285	15157	16441	18207	17049	16185	19182	22053	28419	34744	41836
France	22210	23317	25365	27386	28659	30927	30073	30034	28159	21263	22402
Germany	35086	36865	38476	41569	42115	45449	44609	42360	46110	31415	34149
Hong Kong	9865	13966	15117	12925	12652	14582	14028	12612	13542	15827	16322
Japan	97583	101142	99797	87718	87981	97444	86553	80441	80613	54243	55409
Mexico	54997	66233	82177	90478	99410	125531	116387	113521	113853	110835	120048
Saudi Arabia	8239	9000	10349	12490	9888	6234	5958	4779	4596	5256	6829
Taiwan	23719	22508	25101	22169	23981	24406	18122	18394	17488	21744	22049
U.K.	47481	51166	60254	65617	65562	73080	70917	64765	67806	36000	38628
Venezuela	7136	7158	9297	9590	8633	8845	8919	6821	4990	4767	6408

Source: US Census Bureau website: http://www.census.gov/foreign-trade/balance/index.html
Source: http://www.export.gov/tradestatistics.html

Table 2b

IMPORTS
Trade Between U.S. And Other Countries
(Includes Both Goods And Services)
(In Millions of $)

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Country											
Brazil	9998	10194	11390	11905	13079	13853	14466	15812	17884	21159	24436
Canada	155530	168344	181745	188384	213546	251841	236411	230167	243670	256359	287870
China	47217	53449	64763	73448	84452	100018	102278	125168	152379	196682	243462
France	23160	24669	27406	31614	33937	40735	40668	38734	39878	31605	33847
Germany	44430	46650	51084	59652	65272	75536	76744	83575	91026	77265	84812
Hong Kong	10291	9865	10288	10538	10528	11449	9646	9329	8850	9313	8893
Japan	136942	128094	135716	135367	147096	165347	144393	140184	137243	129805	138091
Mexico	70031	83215	95775	104499	119489	147785	142933	146723	150892	155901	170197
Saudi Arabia	8936	10904	9941	7096	9188	14365	13272	13143	18069	20958	27227
Taiwan	31828	32609	35999	36055	38712	40503	33374	32199	31600	34623	34838
U.K.	42992	45165	54014	58044	62941	72312	69022	68323	74027	46273	51063
Venezuela	10465	13940	14185	9890	11987	19261	15945	15583	17586	24920	33964

Source: US Census Bureau website: http://www.census.gov/foreign-trade/balance/index.html
Source: http://www.export.gov/tradestatistics.html

Table 2c

TRADE BALANCE
Trade Between U.S. And Other Countries
(Includes Both Goods And Services)
(In Millions of $)

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Country											
Brazil	6438	7728	10929	9855	5664	1468	1413	-3403	-6666	-7262	-9091
Canada	-10377	-14642	-9474	-12625	-26123	-48260	-48680	-44424	-46756	-66480	-76521
China	-32932	-38292	-48322	-55241	-67403	-83833	-83096	-103115	-123961	-161938	-201625
France	-950	-1352	-2041	-4228	-5278	-9808	-10595	-8700	-11719	-10342	-11445
Germany	-9344	-9785	-12608	-18083	-23157	-30087	-32135	-41215	-44916	-45849	-50663
Hong Kong	-427	4102	4829	2387	2124	3133	4381	3283	4692	6513	7429
Japan	-39359	-26952	-35919	-47649	-59115	-67903	-57840	-59743	-56630	-75562	-82681
Mexico	-15034	-16982	-13598	-14021	-20079	-22254	-26546	-33202	-37039	-45066	-50149
Saudi Arabia	-697	-1904	408	5394	700	-8131	-7315	-8364	-13473	-15701	-20398
Taiwan	-8109	-10101	-10898	-13886	-14731	-16097	-15253	-13805	-14112	-12879	-12788
U.K.	4489	6001	6240	7573	2621	768	1895	-3558	-6221	-10273	-12434
Venezuela	-3329	-6782	-4888	-300	-3354	-10416	-7026	-8762	-12596	-20153	-27556

Source: US Census Bureau website: http://www.census.gov/foreign-trade/balance/index.html
Source: http://www.export.gov/tradestatistics.html

Table 2d

COEFFICIENTS OF TRADE IMBALANCE (q)
Trade Between U.S. And Other Countries
(Includes Both Goods And Services)
(In Millions of $)

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Country											
Brazil	0.24	0.27	0.32	0.29	0.18	0.05	0.05	-0.12	-0.23	-0.21	-0.23
Canada	-0.03	-0.05	-0.03	-0.03	-0.07	-0.11	-0.11	-0.11	-0.11	-0.15	-0.15
China	-0.54	-0.56	-0.6	-0.6	-0.66	-0.72	-0.68	-0.7	-0.69	-0.70	-0.71
France	-0.02	-0.03	-0.04	-0.07	-0.08	-0.14	-0.15	-0.13	-0.17	-0.20	-0.20
Germany	-0.12	-0.12	-0.14	-0.18	-0.22	-0.25	-0.26	-0.33	-0.33	-0.42	-0.43
Hong Kong	-0.02	0.17	0.19	0.1	0.09	0.12	0.19	0.15	0.21	0.26	0.29
Japan	-0.17	-0.12	-0.15	-0.21	-0.25	-0.26	-0.25	-0.27	-0.26	-0.41	-0.43
Mexico	-0.12	-0.11	-0.08	-0.07	-0.09	-0.08	-0.1	-0.13	-0.14	-0.17	-0.17
Saudi Arabia	-0.04	-0.1	0.02	0.28	0.04	-0.39	-0.38	-0.47	-0.59	-0.60	-0.60
Taiwan	-0.15	-0.18	-0.18	-0.24	-0.23	-0.25	-0.3	-0.27	-0.29	-0.23	-0.22
U.K.	0.05	0.06	0.05	0.06	0.02	0.01	0.01	-0.03	-0.04	-0.12	-0.14
Venezuela	-0.19	-0.32	-0.21	-0.02	-0.16	-0.37	-0.28	-0.39	-0.56	-0.68	-0.68

Source: US Census Bureau website: http://www.census.gov/foreign-trade/balance/index.html
Source: http://www.export.gov/tradestatistics.html

Table 2e

COEFFICIENTS OF TRADING PARTNER EXPLOITATION (Q)
Trade Between U.S. And Other Countries
(Includes Both Goods And Services)
(In Millions of $)

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Country											
Brazil	24.35	27.49	32.42	29.27	17.8	5.03	4.66	-12.06	-22.9	-20.72	-22.85
Canada	-3.45	-4.55	-2.68	-3.47	-6.51	-10.6	-11.48	-10.68	-10.61	-14.90	-15.33
China	-53.55	-55.81	-59.51	-60.27	-66.41	-72.14	-68.41	-70.04	-68.56	-69.97	-70.67
France	-2.09	-2.82	-3.87	-7.17	-8.43	-13.69	-14.98	-12.65	-17.22	-19.56	-20.35
Germany	-11.75	-11.72	-14.08	-17.86	-21.56	-24.87	-26.48	-32.73	-32.75	-42.19	-42.59
Hong Kong	-2.12	17.21	19.01	10.17	9.16	12.04	18.51	14.96	20.95	25.91	29.46
Japan	-16.78	-11.76	-15.25	-21.36	-25.15	-25.84	-25.04	-27.08	-25.99	-41.06	-42.73
Mexico	-12.02	-11.36	-7.64	-7.19	-9.17	-8.14	-10.24	-12.76	-13.99	-16.90	-17.0
Saudi Arabia	-4.06	-9.57	2.01	27.54	3.67	-39.47	-38.04	-46.67	-59.44	-59.90	-59.90
Taiwan	-14.6	-18.33	-17.84	-23.85	-23.5	-24.8	-29.62	-27.29	-28.75	-22.85	-22.48
U.K.	4.96	6.23	5.46	6.12	2.04	0.53	1.35	-2.67	-4.39	-12.49	-13.86
Venezuela	-18.91	-32.15	-20.82	-1.54	-16.27	-37.06	-28.26	-39.11	-55.79	-67.88	-68.26

Source: US Census Bureau website: http://www.census.gov/foreign-trade/balance/index.html
Source: http://www.export.gov/tradestatistics.html

A TWENTY-FIRST CENTURY UPDATE

Table 3a

EXPORTS
Trade Between U.S. And Other Countries
(Includes Both Goods And Services)
(In Millions of $)

Year	2006	2007	2008	2009	2,010	2,011	2,012	2,013	2014	2015	2016
Country											
Brazil	18,887	24,172	32,299	26,095	35,418	43,019	43,771	44,106	42,432	31,641	30,107
Canada	230,656	248,888	261,150	204,658	249,256	281,292	292,651	300,755	312,817	280,855	266,797
China	53,673	62,937	69,733	69,497	91,911	103,986	110,517	121,746	123,657	115,932	115,602
France	23,512	26,676	28,840	26,493	26,970	27,802	30,813	31,744	31,289	30,055	31,132
Germany	41,159	49,420	54,505	43,306	48,155	49,147	48,803	47,363	49,419	49,945	49,363
Hong Kong	17,742	19,902	21,499	21,051	26,570	36,345	37,472	42,332	40,913	37,183	34,895
Japan	58,459	61,160	65,142	51,134	60,472	65,686	69,976	65,237	66,892	62,393	63,236
Mexico	133,722	135,918	151,220	128,892	163,665	198,069	215,875	225,954	241,007	236,204	229,702
Saudi Arabia	7,640	10,396	12,484	10,792	11,506	13,827	17,961	18,963	18,717	19,790	17,972
Taiwan	22,709	25,829	24,926	18,486	26,050	25,885	24,337	25,523	26,675	25,823	26,037
UK	45,410	49,981	53,599	45,704	48,410	56,033	54,860	47,361	53,913	56,095	55,289
Venezuela	9,002	10,201	12,610	9,315	10,645	12,383	17,517	13,201	11,178	8,344	5,233

Source: US Census Bureau website: http://www.census.gov/foreign-trade/balance/index.html

Table 3b

IMPORTS
Trade Between U.S. And Other Countries
(Includes Both Goods And Services)
(In Millions of $)

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Country											
Brazil	26,367	25,644	30,453	20,070	23,958	31,737	32,123	27,541	30,021	27,441	26,054
Canada	302,438	317,057	339,491	226,248	277,637	315,325	324,263	332,504	349,286	296,231	277,756
China	287,774	321,443	337,773	296,374	364,953	399,371	425,619	440,430	468,475	483,189	462,618
France	37,040	41,553	44,049	34,236	38,355	40,049	41,646	45,706	47,105	47,752	46,710
Germany	89,082	94,164	97,497	71,498	82,450	98,684	109,226	114,342	124,182	124,819	114,099
Hong Kong	7,947	7,026	6,483	3,571	4,296	4,410	5,456	5,654	5,897	6,793	7,407
Japan	148,181	145,463	139,262	95,804	120,552	128,928	146,432	138,575	134,505	131,383	132,046
Mexico	198,253	210,714	215,942	176,654	229,986	262,874	277,594	280,556	295,730	296,401	294,056
Saudi Arabia	31,689	35,626	54,747	22,053	31,413	47,476	55,667	51,807	47,041	22,081	16,918
Taiwan	38,212	38,278	36,326	28,362	35,847	41,405	38,861	37,939	40,840	40,905	39,248
UK	53,513	56,858	58,587	47,480	49,805	51,263	55,006	52,741	54,690	57,993	54,272
Venezuela	37,134	39,910	51,424	28,059	32,707	43,257	38,724	31,998	30,220	15,564	10,893

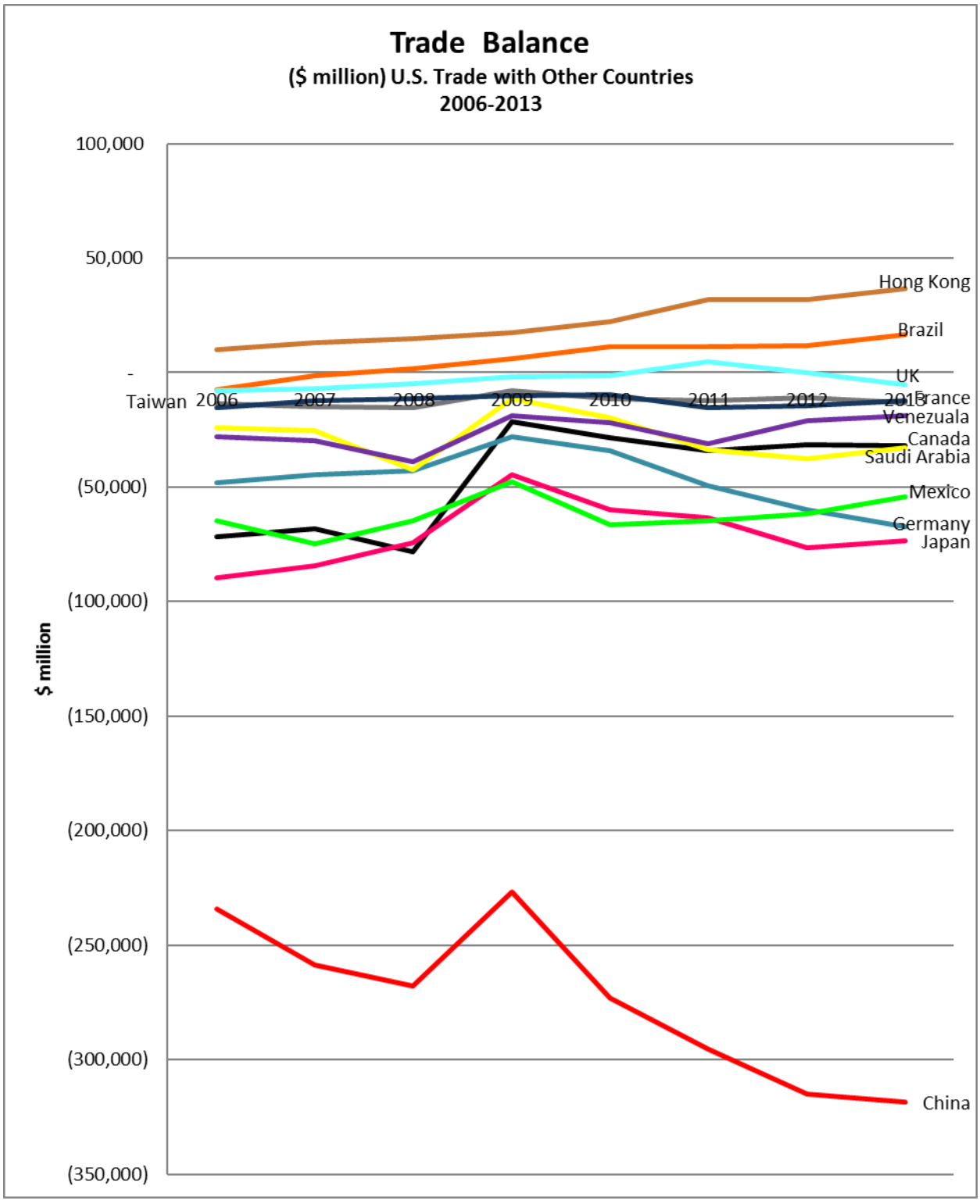
Source: US Census Bureau website: http://www.census.gov/foreign-trade/balance/index.html

Table 3c

TRADE BALANCE
Trade Between U.S. And Other Countries
(Includes Both Goods And Services)
(In Millions of $)

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Country											
Brazil	-7,480	-1,472	1,846	6,026	11,460	11,282	11,648	16,564	12,411	4,199	4,053
Canada	-71,782	-68,169	-78,342	-21,590	-28,380	-34,033	-31,612	-31,749	-36,469	-15,375	-10,958
China	-234,101	-258,506	-268,040	-226,877	-273,042	-295,385	-315,102	-318,684	-344,818	-367,257	-347,016
France	-13,528	-14,877	-15,209	-7,743	-11,386	-12,247	-10,833	-13,963	-15,816	-17,697	-15,578
Germany	-47,923	-44,744	-42,991	-28,192	-34,295	-49,537	-60,423	-66,978	-74,763	-74,873	-64,736
Hong Kong	9,795	12,876	15,015	17,480	22,274	31,935	32,016	36,678	35,016	30,390	27,487
Japan	-89,722	-84,304	-74,120	-44,669	-60,080	-63,242	-76,456	-73,338	-67,613	-68,990	-68,810
Mexico	-64,531	-74,796	-64,722	-47,762	-66,321	-64,805	-61,718	-54,602	-54,723	-60,197	-64,354
Saudi Arabia	-24,049	-25,230	-42,263	-11,261	-19,907	-33,649	-37,706	-32,844	-28,324	-2,290	1,055
Taiwan	-15,502	-12,449	-11,400	-9,877	-9,797	-15,520	-14,524	-12,416	-14,164	-15,082	-13,211
UK	-8,103	-6,876	-4,988	-1,776	-1,395	4,771	-145	-5,380	-776	-1,898	1,017
Venezuela	-28,131	-29,709	-38,814	-18,744	-22,063	-30,873	-21,207	-18,797	-19,042	-7,220	-5,660

Source: US Census Bureau website: http://www.census.gov/foreign-trade/balance/index.html



Source: Table 3c
and US Census Bureau website: http://www.census.gov/foreign-trade/balance/index.html

Table 3d

COEFFICIENTS OF TRADE IMBALANCE (q)
Trade Between U.S. And Other Countries
(Includes Both Goods And Services)
(In Millions of $)

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Country											
Brazil	-0.17	-0.03	0.03	0.13	0.19	0.15	0.15	0.23	0.17	0.07	0.07
Canada	-0.13	-0.12	-0.13	-0.05	-0.05	-0.06	-0.05	-0.05	-0.06	-0.03	-0.02
China	-0.69	-0.67	-0.66	-0.62	-0.6	-0.59	-0.59	-0.57	-0.58	-0.61	-0.60
France	-0.22	-0.22	-0.21	-0.13	-0.17	-0.18	-0.15	-0.18	-0.20	-0.23	-0.20
Germany	-0.37	-0.31	-0.28	-0.25	-0.26	-0.34	-0.38	-0.41	-0.43	-0.43	-0.40
Hong Kong	0.38	0.48	0.54	0.71	0.72	0.78	0.75	0.76	0.75	0.69	0.65
Japan	-0.43	-0.41	-0.36	-0.3	-0.33	-0.32	-0.35	-0.36	-0.34	-0.36	-0.35
Mexico	-0.19	-0.22	-0.18	-0.16	-0.17	-0.14	-0.13	-0.11	-0.10	-0.11	-0.12
Saudi Arabia	-0.61	-0.55	-0.63	-0.34	-0.46	-0.55	-0.51	-0.46	-0.43	-0.05	0.03
Taiwan	-0.25	-0.19	-0.19	-0.21	-0.16	-0.23	-0.23	-0.20	-0.21	-0.23	-0.20
UK	-0.08	-0.06	-0.04	-0.02	-0.01	0.04	0.00	-0.05	-0.01	-0.02	0.01
Venezuela	-0.61	-0.59	-0.61	-0.5	-0.51	-0.55	-0.38	-0.42	-0.46	-0.30	-0.35

Source: US Census Bureau website: http://www.census.gov/foreign-trade/balance/index.html

Table 3e

COEFFICIENTS OF TRADING PARTNER EXPLOITATION (Q)
Trade Between U.S. And Other Countries
(Includes Both Goods And Services)
(In Millions of $)

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Country											
Brazil	-16.53	-2.95	2.94	13.05	19.3	15.09	15.35	23.12	17.13	7.18	7.22
Canada	-13.47	-12.05	-13.04	-5.01	-5.39	-5.71	-5.09	-5.02	-5.59	-2.66	-2.12
China	-68.56	-67.25	-65.78	-62.01	-59.76	-58.68	-58.78	-56.61	-58.23	-61.30	-6.15
France	-22.34	-21.8	-20.87	-12.75	-17.43	-18.05	-15.08	-17.27	-2.17	-22.74	-2.12
Germany	-36.8	-31.16	-28.28	-24.56	-26.26	-33.51	-38.04	-41.46	-43.66	-42.84	-39.63
Hong Kong	38.13	47.82	53.66	70.99	72.16	78.36	74.58	76.56	74.84	69.16	64.98
Japan	-43.42	-40.8	-36.26	-30.4	-33.19	-32.5	-35.33	-36.03	-33.57	-35.63	-35.24
Mexico	-19.44	-21.58	-17.63	-15.63	-16.85	-14.06	-12.49	-10.72	-1.20	-11.32	-12.29
Saudi Arabia	-61.15	-54.82	-62.86	-34.28	-46.38	-54.89	-51.19	-46.35	-43.74	-5.47	3.23
Taiwan	-25.45	-19.42	-18.61	-21.08	-15.83	-23.06	-22.95	-19.34	-2.98	-22.62	-2.24
UK	-8.19	-6.44	-4.45	-1.91	-1.42	4.3	-0.1	-5.26	-0.71	-1.66	0.93
Venezuela	-60.97	-59.29	-60.61	-50.15	-50.89	-55.56	-37.71	-41.53	-46.00	-3.20	-35.11

Source: US Census Bureau website: http://www.census.gov/foreign-trade/balance/index.html

RESULTS

A visual survey of the tables provided in this study offers information about the bilateral trade relationships of the United States and its leading trading partners. The evolving task from observing the data sections of this paper is the finding of patterns of consistently great imbalances in the bilateral trades with the countries being studied.

For the case of the United States Table 1 shows the enormity of the United States trade deficit with the world as a whole. Tables 2a, 2b, and 2c show the important trade flows of the United States and the resulting surpluses and deficits in bilateral trade relationships. Table 2d shows the associated C*oefficients of Trade Imbalance*. Table 2e presents, for better identification, the *Coefficients of Trading Partner Exploitation*.

Through a "Twenty-First Century Update", Tables 3a, 3b, 3c, 3d and 3e accomplish the same functions for a recent period.

The evidence points toward the desirability of giving special attention to Japan and China as two leading trading partners with especially great trade imbalances.

THE US-JAPAN-CHINA NEXUS

For several decades and into the 1980's and 1990's Japan was the country that constantly gained a very large trade surplus from its trade with the United States. Though in recent years those surpluses have been below their earlier maximums, Japan maintains large balances in its own favor despite a near tripling in the exchange value of its currency against the US. Dollar. At these exchange rates, the prices of most products available from the US should make those products major bargains for Japanese purchasers. Yet big trade surpluses from the bilateral trade continue to accrue to Japan. But in the 1990's and into the current century, China emerged as the country with enormous, almost unprecedentedly large, trade surpluses against the US.

Moreover, at the start of 2018, it appears that China's need for and dependence on the US has become smaller and may continue to shrink, because using various resources and methods, China has already acquired nearly all of the advanced knowledge and operating capabilities of the US.

The value of the annual improper acquisitions by China from the US is estimated to be over $300 billion. These nearly match the very large annual transfers of wealth from the US to the PRC through the trade surpluses that China achieves against the USA. Nonetheless, a serious reduction in the annual imports from China of about $100 to $200 billion would impact adversely China's ability to employ its work force and to continue its hard currency wealth accumulation.

As desirable as an immediate and large reduction in imports would be (Pattis, 2012) from the viewpoint of achieving a more balanced economic relationship between the two nations, it might not be possible to implement as America's industries have been hollowed out and turned into just components in bigger global supply chains. Manufacturing in China has also evolved to be very large components in, and at times majority parts in the supply chains that provide products essential for the industries, government and the people of the United States.

The US is now highly dependent on, and therefore in many product areas, subservient to foreign suppliers, above all to the People's Republic of China. The *de facto* reality at the start of 2018 is that China is rich and powerful and the USA is less so than before.

The movement of the evolution of trade relationships among countries was in the direction from the closed-to-foreign suppliers condition inherent in mercantilism toward the openness inherent in the principles of globalization. The extent to which some individual countries and specific trading blocs combined and still combine mercantilism with globalization varies. But Gabberty and Vambery found (2014) that some countries, including Japan and China, gained enormously by finding ways for continuing to engage in mercantilism. Other countries that advocated and implemented far reaching openness, including the United States, have incurred colossal financial losses.

DISCUSSION AND CONCLUSIONS: THE SIMULTANEOUS PRACTICE OF MERCANTILISM AND GLOBALIZATION

In discussing "the simultaneous practice of mercantilism and globalization" (Peukert, 2012) the focus is on the benefits that can accrue to a country that is effectively practicing mercantilism and then adds to that the benefits

that can accrue from operating under globalized, largely free trade.

This then points to the unfairness, even to the great abuse, existing under arrangements in which

1) a domestic economy is enabled to grow because foreign suppliers are to an extent excluded from its markets (I.e. mercantilism) while
2) the same country's producers are able to realize substantial incomes by having access to quite open foreign markets that operate under the openness of globalization.

Most countries do implement some protectionist measures and even mercantilist countries are open to some imports, if for no other reasons that they do not have the quantity of certain items from domestic sources that they deem necessary for themselves.

However, globalization is a *quid quo pro* arrangement. Mercantilism is a *unilateral, self-interest seeking* arrangement that denies equal or even just similar opportunities to foreign countries and their producers. The production and other business activities of multinational corporations pursued outside the borders of their home countries add to and benefit the GDP's of the other countries.

A good economic way to identify the nationality of a product is to trace where value is added to the product. This is an alternative to the more marketing oriented identifications that emphasize brand names or headquarters locations or the nationality of managers and owners. Using the location of value added criterion, many Japanese brand automobiles qualify as American products (Vambery and Gabberty, 2001), because more, even substantially more than half of their values were created inside the US.

The incomes of US based MNC's earned in foreign countries are parts of the GDP's of the host countries. However, those DO NOT add to the deficits of the United States. Trade deficits of the US may be enlarged (Ossa, 2014), when some of the products created by the foreign subsidiaries of US based MNC's are imported into the US.

The earnings netted after the payment of host country taxes of US based corporations become contributions to America's Gross National Income when they are patriated to or brought to the US. The funds brought to the US can become significant wealth or growth engendering contributions to the US economy. Then they also become subject to US taxes.

The accumulated but not yet repatriated earnings of US based MNC's are currently estimated to be in the range of two thousand billion dollars. It is surprising that the previous Administration did not arrange to bring much of those funds to the US.

Further study of these statistics would need to be made in order to draw conclusions about the various bilateral trade relationships of the U.S. However, the great consistency of very negative coefficients for the U.S. and very positive coefficients for Japan and especially China point to the likelihood that relationships of trading partner abuse are present and that the construction of tables of *Coefficients of Trading Partner Exploitation* may be in order.

In the absence of aggressive actions against mercantilists, including China and Japan, many mercantilist policies and practices will continue to the great detriment of the countries that are subject to *trading partner exploitation*.

The simultaneous practice of globalization and mercantilism may not be desirable for the growth of international trade or the welfare of the world as a whole. However, it is a winning formula in international business for countries that are able to implement it, whether with the approval by or over the opposition of their trading partners.

It appears that a formula for winning in international business is *outward globalization* combined with *inward mercantilism*.

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BRIDGING THE ACADEMIC-PRACTITIONER CHASM: TOWARDS A MODEL OF HOTEL B2B SALES

Richard McNeill and Hester Nienaber

ABSTRACT

B2B sales faces a challenge because its knowledge is fragmented and to progress it needs a systematic body of knowledge. Moreover, theory develops slower than what practitioners need solutions to their problems, and consequently practitioners consume little academic literature. This contributes to the theory-practice divide that characterizes applied disciplines, like sales. The academic literature is limited regarding B2B sales models, while practitioner literature refers to such models, which are not necessarily rooted in theory. Hence, this conceptual paper presents a synthesized hotel B2B sales model, relevant to practitioners, while anchored in theory, based on a review of academic and practitioner literature. This is in response to calls for further research to integrate fragmented existing theory and to bridge the theory-practice divide. The paper shows that (i) the hotel B2B sales model comprises complex constructs, which hold challenges for theory development; (ii) the (major) hotel corporations operate in all modes of Inter-Organizational Integration and various relationship strengths – i.e. transactional, consultative, collaborative and strategic; and (iii) economic and behavioral theories explain this evolving model. The contribution of this paper stems from enhancing understanding by integrating fragmented knowledge, while clarifying ambiguous concepts. Implications, include that selling organizations need to carefully select buying partners according to the mutually agreed upon values to be exchanged in the different selling modes. Limitations include that the model is based upon practices of the world's largest hotel corporations, based in the USA, and thus findings may be less transferable to smaller, less resource-rich hotel firms. Information regarding hotel B2B sales is limited as most of this information is believed to be competitively proprietary and difficult to access. Future research remains to detail each of the components in the proposed hotel B2B sales model and whether and to what degree the model can be useful to especially smaller and less resourced hotel corporations.

Keywords: B2B sales; competitive advantage; conceptual; hotel industry; model; strategic accounts; theory building; value-exchange management.

INTRODUCTION

Neil Rackham (2012), the prominent sales scholar and practitioner, opined, "… the future of B2B sales requires that we build a systematic body of knowledge. We need to bring together sales knowledge that is as good as the current body of marketing knowledge. And, though fragmented, the sales knowledge is out there." To complicate matters "The word *sales,* is an unfortunate and imprecise term," states Rackham, as it often

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simultaneously refers to both selling cookies and selling enterprise-level computer systems. Isn't *sales,* from the most simple to complex engagements, essentially a *value-exchange process* between parties? Articulating and framing a systematic body of sales – or alternatively stated, *value-exchange management* - knowledge is needed, but in addition, threatened by an academic-practitioner divide.

Applied disciplines, like sales and marketing, are characterized by a theory-practice gap (Lilien, 2016; Mora Cortez & Johnston, 2017; Swanson & Chermack, 2013). In the case of sales and marketing, this gap dates to the earliest publications (Hadjikhani & LaPlaca, 2013). Many reasons are advanced for this theory-practice gap. On the one hand, scholars generally do not have experience or access to B2B practice (Lilien, 2016). On the other hand, practitioners, consume as little as 4% of scholarly articles because they question the relevance of the research (Mora Cortez & Johnston, 2017). Consequently, practitioners do not use theory proposed by scholars (Lilien, 2016). This is not surprising as scholarly research generally does not incorporate their theoretical descriptions and confirmations into practical terms. Scholarly research often overinterprets partial theories resulting in incomplete explanations (Swanson & Chermack, 2013). This is contrary to sound theory as proposed by *inter alia* Jaccard and Jacoby (2010) and Swanson and Chermack (2013). Moreover, theory development is slow (Mora Cortez & Johnston, 2017) and seldom progresses beyond the conceptualization phase (Swanson & Chermack, 2013). Practitioners need immediate answers (Swanson & Chermack, 2013) for problems that evolve faster than academics can deliver theories, or *models* in the case of social sciences (Jaccard & Jacoby, 2010; Mora Cortez & Johnston, 2017). To advance towards a rigorous theory, that is actionable in practice, both theory and practice are required (Mora Cortez & Johnson, 2017; Swanson & Chermack, 2013).

Business-to-Business (B2B) sales, specifically in the hotel industry, presents a current example of the theory-practice divide (McNeill & Nienaber, 2018). A contributing reason for this divide is the different goals pursued by academics and practitioners (Mora Cortez & Johnson, 2017). A review of the academic literature showed the dominating topic as the successful implementation of B2B sales, by using a variety of economic or behavioral theories (Hadjikhani & LaPlaca, 2013; McNeill & Nienaber, 2018). A review of the practitioner literature, in contrast, revealed dominating practical models for enacting B2B sales (see Andersen & Stein, 2016; Capon, 2001; Schultz & Doerr, 2014; Zimmerman, 2018). However, these models lack theoretical grounding. It was also noted that the terminology used differed across sources, whether from academic or practitioner literature (Lacoste, 2018). Furthermore, some concepts, like *relationship,* are ambiguous (Hadjikhani & LaPlaca, 2013; Sheth, 2017). These observations allude to and support the notion that B2B sales lacks a well-developed and systematic body of knowledge (Mora Cortez & Johnson, 2017; Rackham, 2012; Roberts & Shea, 2017; Sheth, 2017). Consequently, the B2B sales field is fertile ground for theory building. Hence, it is surprising to note that, specifically hotel, B2B sales is neglected in the academic literature (Lilien, 2016; McNeill & Nienaber, 2018). This observation is perplexing as both academic and practitioner literature acknowledges the importance of B2B sales in generating organizational revenue (Lilien, 2016; Wang & Brennan, 2014; Zimmerman, 2018).

Major hotels, including the two major hotel corporations, headquartered in the US are present across the globe (Hotel Magazine, 2017:36). Furthermore, the US hotel corporations dominate the industry globally with revenue reaching about US$193 billion in 2017, and, is estimated to amount to about US$235 billion in 2022 (Euromonitor, 2018). Moreover, hotel B2B revenue contributes a significant proportion of top-line revenue (Noone & Hultberg, 2011; Wang & Brennan, 2014). Thus, it stands to reason that ineffectiveness and inefficiencies in hotel B2B sales models put top-line revenue and profitability under pressure (Capon, 2001; McNeill & Nienaber, 2018). This pressure is intensified by (i) the high failure rate of B2B sales, mainly operating in the collaboration and strategic account modes (see Figure 1) (Capon, 2001; Guenzi & Storbacka, 2015; Hadjikhani & LaPlaca, 2013), and (ii) the evolving nature of B2B sales (Arli, Bauer, & Palmatier, 2018; Lacoste, 2018; Moncrief, 2017; Rach, 2015). Hence, better research addressing concerns of both scholars and practitioners is needed to improve understanding and practice of successful B2B sales.

An overlooked area of academic research is the changing landscape of B2B buying/selling, such as the evolving shift from transactional toward strategic selling (Lilien, 2016; McNeill & Nienaber, 2018; Moncrief, 2017; Rackham, 2012). Previous B2B studies attended to switching cost (Blut, Evanschitzky, Backhaus, Rudd, & Marck, 2016); value-based selling (Töytäri & Rajala, 2015); value co-creation (Möller & Halinen, 2018); relationship selling (Arli et al., 2018); building an effective B2B program, as practiced by key/strategic account management (Davies, Ryals, & Holt, 2010; Gounaris & Tzempelikos, 2014; Lee, Su & Dubinsky, 2005; Sheth, 2017); the competencies of salespersons and strategic account managers (Lacoste, 2018; Weilbaker & Crocker, 2001); the

interface between sales and other functional areas such as marketing and revenue management (Wang, 2012, Wang & Brennan, 2014); the future of B2B sales (McNeill, 2017); and the development and future of a B2B marketing/sales theory (Hadjikhani & LaPlaca, 2013; Mora Cortez & Johnson, 2017). These studies were mainly approached from the seller's perspective, without significant input from the buyer/purchasing organization. This is odd as today, power is shifting to the buyer organization (Friend, Curasi, Bole, & Bellenger, 2014; Paesbrugghe, Rangarajan, Sharma, Syam, & Jha, 2017).

This study is in response to the call for further research to address the changing B2B buying/selling landscape, and to close the theory-practice gap (Lilien, 2016; McNeill & Nienaber, 2018; Moncrief, 2017; Mora Cortez & Johnston, 2017; Rach, 2015; Roberts & Shea, 2017). The focus is on B2B buying/selling in the US hotel industry. The purpose of this paper is to present a synthesized hotel B2B sales model, relevant to practitioners, while anchored in theory. The research question is: "What are the key components of a contemporary US hotel corporate B2B sales model?" Thus, the objectives of this paper are to contribute to bridging the theory-practice gap in general B2B sales as applied to the hotel industry while integrating fragmented existing knowledge in a systematic body.

Literature, especially academic literature, is not unanimous about B2B sales (Lilien, 2016; McNeill & Nienaber, 2018; Mora Cortez & Johnson, 2017). However, it is generally accepted that *relationship* is central to B2B sales (Akrout & Diallio, 2017; Andersen & Stein, 2016; Capon, 2001; McNeill & Nienaber, 2018; Moncrief, 2017; Sheth, 2017; Schultz & Doerr, 2014; Zaeferian, Thiesbrummel, Henneberg, & Naude, 2017; Zimmerman, 2018). Also, not all literature distinguishes between B2B sales and marketing probably because sales and marketing converge, as discussed later in this paper. For purposes of this paper, we adapted the B2B hotel sales definition of McNeill (2017). Hotel group sales are acquired by living, breathing salespeople regardless of the source of prospects/leads. S*alesforce* refers to a group of people – inbound salespeople in regional centers (*Cube Farms*), local or hotel property-level salesforces, and strategic account teams – national, multi-national, and global – facilitating the exchange of products and services, solutions and other value to a B2B market. This market is primarily meeting and convention planners and decision-makers, who purchase meeting space and ancillary services from hotels and other venues. This definition is elaborated on in the next section, which clarifies the terminology used in this paper. The clarified terminology serves as input to the proposed model of hotel B2B sales. This paper closes with conclusions and recommendations for further research.

TOWARDS A HOTEL B2B SALES MODEL

Clarifying terminology ensures a shared understanding to aid the classificatory and explanatory functions of theory. We first define applied disciplines in view of theory in applied disciplines and the components of theory. Then, we elaborate on B2B sales in the US hotel industry to progress towards an exemplar model of B2B sales in the hotel industry.

Theory Defined

According to Swanson and Chermack (2013:6) "applied disciplines are fields of study and practice which are fully understood through their use in the functioning world." This requires a balanced approach between theory and practice to succeed (Swanson & Chermack, 2013). Consequently, sound theories are necessary to displace false theories, which can inflict harm on people, organizations and societies (Ghoshal, 2005; Swanson & Chermack, 2013). Thus, theory should be anchored in confirmed effective alternatives (Swanson & Chermack, 2013). This may be challenging for the applied disciplines, because of a range of impacting factors that are difficult to control (Swanson & Chermack, 2013). Consequently, theories that account for differences are considered not formal. Yet, these theories can still fulfill the function of explanation by (i) constructing causal models of phenomena, which are (ii) plausible to the degree that they identify real causal processes that produce certain states of affairs (Jaccard & Jacoby, 2010). Furthermore, these models do not purport to be more than an approximation or partial representation of a specific phenomenon, as they only agree in a broad sense to the phenomenon they are fashioned on (Jaccard & Jacoby, 2010; Swanson & Chermack, 2013) and thus enhances understanding. As such, theory in the social sciences, regardless of its scope and degree of specificity, provides an explanation of events or phenomena by way of causal

models by postulating a causal process that accounts for phenomena (Jaccard & Jacoby, 2010; Swanson & Chermack, 2013).

There are different strategies to build theory in the applied disciplines (Swanson & Chermack, 2013). We have pursued the 'theory-to-research strategy', which makes theory building explicit by the continuous, iterative interaction between theory construction and empirical inquiry (Swanson & Chermack, 2013). This theory-building strategy is qualitative, reflecting multiple and divergent realities (Swanson & Chermack, 2013). Theory building in applied disciplines consists of five phases, namely, (i) conceptualize, (ii) operationalize, (iii) apply, (iv) confirm, and (v) refine. All phases are necessary to produce a trustworthy, rigorous and relevant theory for improved action – i.e., successful hotel B2B sales in this instance. This paper focuses on the first phase, that is, *conceptualize*. It encompasses the formulation of initial ideas that describe the contemporary understanding of a phenomenon, to develop a sound conceptual framework providing an initial understanding and explanation of the nature and dynamics of the phenomenon. Conceptualization includes the development of critical elements of the theory, an initial explanation of their interdependence, and the general conditions and limitations under which the framework can be expected to operate. The conceptualization phase culminates in an explicit framework that can take the form of, *inter alia*, a *model*, the core explanatory capacity of a theory (Jaccard & Jacoby, 2010; Swanson & Chermack, 2013).

Identifying The Critical Concepts Of A Hotel B2b Sales Model

To identify the critical elements of a hotel B2B sales model, it is necessary to start by elaborating on the definitions. Definitions serve to indicate meaning and relationships between concepts in a model (Jaccard & Jacoby, 2010). Note that the following concepts are complex because they are multi-dimensional and often interwoven, posing challenges for theory development.

B2B Sales – business sellers interacting with business buyers who are purchasing on behalf of their organizations for the purpose of enhancing organizational performance, at varying relationship strengths and levels of integration between buyer/seller. B2B differs from B2C (business-to-consumer) buyer/seller interactions as consumers personally use the purchase. This definition corresponds to that of Mora Cortez and Johnson (2017).

Relationship – Relationship refers to a connection, based on both affinity for each other (personal), and the strength of the values-exchanged (Akrout & Diallio, 2017; Gounaris & Tzempelikos, 2014; Schultz & Doerr, 2014). Some authors point out that the personal connection should not be underestimated in the strength of the value-exchanged as it leads to *trust*, which is imperative in a long-term relationship (Akrout & Diallio, 2017; Andersen & Stein, 2016; Schultz & Doerr, 2014). Trust, a multi-dimensional, dynamic construct, is not universally defined as it pertains to B2B relationships (Akrout & Diallio, 2017). Nevertheless, trust is, commonly, described as a willingness to rely on exchange partners, based on their credibility, to perform as expected, without monitoring the partners, nor by taking advantage of the partners' vulnerabilities (Zaeferian et al., 2017). As such, trust is impacted by a person's and/or team's and/or organization's (i) competence (i.e. knowledge, skills and ability to deliver according to the promised and expected); (ii) integrity (to do the right thing for the right reason and honoring commitments consistently); and (iii) intimacy (closeness to customer in business dealings), which impacts value-exchanged (Akrout & Diallio, 2017; Capon, 2001; Lee et al., 2005; Schultz & Doerr, 2014; Zaeferian et al., 2017). In short, a relationship is a potential state-of-being between organizations comprised of individuals that require varying levels and combinations of value to be exchanged.

Value Exchanged – Values exchanged between B2B buyer and seller organizations are the hoped for and realized relationship and the relative strength of that relationship. Value exchanged can take various forms or a combination thereof (i) *functional* – solution to existing customer problems and/or needs not yet envisioned by the customer; (ii) *economic* – price or cost to B2B relationship whether direct or cost savings and return on investment (ROI); (iii) *psychological* – risk reduction, safety, certainty, peace of mind, status and comfort with a relationship that do not fulfill specific functional or economic needs; and (iv) *meta-level values* – such as accessibility, responsiveness, keeping promises, understanding critical customer issues, communication, ease of doing business with, and competence (Capon, 2001: 206).

The relative strength of the buyer/seller relationship will vary on a continuum from low to high and based on the quantity and quality of the value exchanged as mutually agreed upon between buyer and seller. This level of relative strength may be unrealized or realized – that is, it may exist in a vacuum or be unrealized or not. However, when the buyer and seller engage in interactions, the level of relative strength becomes realized. This engagement attains a label (*modes*) – again on an inter-organizational integration continuum reflecting the degree of integration between engaging parties: *Transactional, Consultative, Collaborative,* and to *Strategic*. These modes intersect with the relative relationship strength continuum to aggregately form a curve (Figure 1) representing the buyer/seller interactional position within the competitive landscape.

Modes: Degree of Buyer/Seller Inter-Organizational Integration – As discussed above, relative relationship strength between buyer and seller can independently exist without inter-organizational integration. Integration refers to the degree of adaptation between buyer and seller organizations in unifying one or more aspects of their businesses e.g., processes and systems. With varying degrees of integration or unification, a different mode can be assigned. Thus, at low relationship strength and low degree of inter-organizational integration, this is a *Transactional* mode. At high relationship strength and high degree of inter-organizational integration, this is a *Strategic* mode.

Transactional – Buyer/Seller interactions are concerned with perceived commodity-like products/services where price is the major value exchanged (Capon, 2001). This mode is characterized by price competition and inclined to be short-term and buyers often easily switch between sellers (Blut et al., 2016; Capon, 2001; Lilien, 2016; Zimmerman, 2018). Today, buyers have gained negotiation power vis-à-vis sellers (Gounaris & Tzempelikos, 2014; Rackham, 2012) for two primary reasons: access to vast amounts of relevant information (Zaeferian et al., 2017) and the almost universal rise of quality products and services (Rackham, 2012). The nature of this mode minimally requires a low relationship strength and a low degree of inter-organizational integration.

This mode reduces uncertainty i.e. psychological value and is characterized by frequent rebuying, largely based on price/cost considerations based on economic value (Capon, 2001; Lilien, 2016). In this mode back-office activity and technology play an important part in the success of the relationship (Arli et al., 2018; Lacoste, 2018; Zimmerman, 2018). Competencies of salespeople servicing customers in this mode should match the goals they pursue e.g., delivering on the short-term to a broad portfolio of customers (Lacoste, 2018). Economic theories, specifically transaction cost theory can be used to explain the phenomenon, because they are regarded to have a short-term, profit-driven focus and aim to stimulate demand based on a reward system (Hadjikhani & LaPlaca, 2013; Williams & Plouffe, 2007).

Consultative – Buyer/Seller interactions are bounded by existing product/service features and benefits. Within these limits the seller uses expertise to modify the basic product/service to match the needs of the buyer. Here price remains a significant concern but, the expertise of the seller becomes an increasingly important value to the buyer (Capon, 2001). Ease of buyers switching sellers becomes more difficult given the rising value of consultative expertise offered by the seller (Blut et al., 2016). Compared with the transactional mode, this mode requires incrementally rising relationship strength and rising inter-organizational integration.

Competencies of sales persons should correspond to the goals they pursue i.e. delivering improved operational efficiencies on the short-term to a broad portfolio of customers (Lacoste, 2018). Economic theories like transaction cost and resource-based theories can be used to explain the phenomenon (Hadjikhani & LaPlaca, 2013; Williams & Plouffe, 2007). According to Paesbrugghe et al. (2017) about 60% of the organization's customers are in the transactional and consultative mode.

Collaborative – In the collaboration mode both buyer and seller are committed to interactions that will uncover mutually beneficial solutions for both organizations (Andersen & Stein, 2016; Capon, 2001; Schultz & Doerr, 2014; Töytäri & Rajala, 2015). Here, both buyer and seller actively engage in a co-value creation (Friend & Johnson, 2014; Zimmerman, 2018), which differs from the consultative mode which is a '*quasi-one-way*' seller controlled question and buyer answer session. In the collaborative mode, resource integration becomes increasingly more important than price albeit, price may decline to marginal significance (Capon, 2001; Blut et al., 2016). Additionally, solutions mutually reached by collaboration parties move past limited and short-term product/need-satisfaction issues (consultative mode) and become longer-term oriented to include concerns such as ROI for both buyer and seller organizations (Andersen & Stein, 2016; Friend & Johnson, 2014; Schultz & Doerr, 2014). The

collaborative mode crosses a relationship strength and inter-organizational integration threshold potentially moving toward the *Strategic Mode*.

In the collaborative mode functional and psychological value exchanged becomes more important than economic value exchanged (Blut et al., 2016) in enhancing operational efficiencies at the buyer organization and stimulating repeat business (Capon, 2001). Competencies of sales persons to deliver superior value become more important. Economic theories like resource-based theories as well as behavioral theories, emphasizing long-term, profitable, relationships with important customers, entailing commitment to mutual goals to ensure success in satisfying customer needs, can be used to explain the phenomenon (Hadjikhani & LaPlaca, 2013; Viio & Grönroos, 2016; Williams & Plouffe, 2007).

Strategic – The last position on the Inter-Organizational Integration continuum (Figure 1) is the strategic mode where sellers interact with a select few important customers vital to both the buyer and sellers' long-term performance, necessitating a right fit between partners (Andersen & Stein, 2016; Friend & Johnson, 2014; Gounaris & Tzempelikos, 2014; Schultz & Doerr, 2014; Zimmerman, 2018). This is analogous to a human marriage, albeit a polygamous one, where all partners are not equal, justifying a differential prioritization (Zimmerman, 2018). Moreover, each of these partners is engaged in other polygamous relationships which reduce risk and vulnerability from a reliance on any single partner (Arli et al., 2018; Blut et al., 2016; Zimmerman, 2018). In this mode, buyer and seller organizations interact at a long-term strategic level whereas the previous modes involved tactical and operational levels (Zimmerman, 2018). The nature of the strategic mode requires a high level of relationship strength and a high degree of inter-organizational integration where buyer/seller switching costs are very high.

In this mode buyers and sellers become 'partners' where long-term business plans of both buyer and seller organizations are linked and adapted (Davies et al., 2010; Friend et al., 2014; Guenzi & Storbacka, 2015; Guesalaga, 2014; Guesalaga & Johnston, 2010; Ivens et al., 2017; Noone & Hultberg, 2011; Viio & Grönroos, 2016; Wang & Brennan, 2014). Suppliers/buyers cannot easily be replaced by competing suppliers/buyers (Blut et al., 2016; Zimmerman, 2018). This relationship is seen as managing a business strategy and anchored in the corporate strategy of the seller/buyer organizations (Zimmerman, 2018). In this relationship the seller organization becomes more responsive to the needs of a few carefully selected important customers (Friend & Johnson, 2014; Zimmerman, 2018). A strategic account manager is the custodian of the relationship with a portfolio of a limited number of customer accounts and thus responsible for all sales activities, including profitability (Andersen & Stein, 2016; Guesalaga & Johnston, 2010; Schultz & Doerr, 2014; Zimmerman, 2018). It stands to reason that this relationship is influenced by many considerations including a multiplicity of stakeholders with different roles, responsibilities and competencies; attracting, selecting and deselecting the most important customers/partners; managing the relationship continuance; the design and implementation of a strategic account program; averting conflict and ensuring harmonious interactions, which impact the relationship strength with these most important customers (Andersen & Stein, 2016; Davies et al., 2010; Friend et al., 2014; Guenzi & Storbacka, 2015; Guesalaga, 2014; Guesalaga & Johnston, 2010; Noone & Hultberg, 2011; Schultz & Doerr, 2014; Wang & Brennan, 2014; Zimmerman, 2018).

It is thus imperative that the strategic account manager has the necessary intra-organizational support and inter-organizational alignment to enable value delivering, including an appropriate position in the organization, possess relevant competencies, support from CEO, and a deep knowledge of the customer's organization (Guesalaga, 2014; Lacoste, 2018; Rackham, 1989; Zimmerman, 2018). The competencies of the strategic account manager must enable him/her to think and act at a strategic level (Lacoste, 2018). Generally, the relationships in the strategic mode represent 20% of customers that contribute 80% of profit of the selling organization (Capon, 2001; Zimmerman, 2018). In this mode economic theories, particularly resource-based theories and capability theories, as well as behavioral theories can be used to explain the phenomenon (Hadjikhani & LaPlaca, 2013; Williams & Plouffe, 2007).

Given the dynamic nature of the relationship, it should be noted that the customers' position on this continuum is not necessarily stable – it may change due to changes in the needs and value of the customer (Zimmerman, 2018).

Red, Purple, and Blue Oceans: The Competitive Landscape – Authors Kim and Mauborgne (2017), metaphorically distinguish boundaries between price competition (Red Ocean) versus value differentiation (Blue Ocean) strategies. As a rule, in B2B sales, it has been noted that the *Pareto* principle operates: 80% of customers

generate 20% of business revenue while 20% of customers generate 80% of revenue. Kim and Mauborgne (2017) imply that the 80% of customers are labeled, *Red Ocean* – indicating that there is a bloody competitive battle between apex predator sharks (sellers) hungrily chasing a limited number of fatty but nimble fur seals (buyers). This is price competition where buyers agilely and often switch between sellers; loyalty is *thin*. By contrast, Kim and Mauborgne (2017) note that when a business adopts a new and innovative strategy, they can potentially move to the Blue Ocean, free of dominating price competition. Organizations compete through creating complex value differentiation where switching costs are high (due to the degree of inter-organizational integration) and loyalty is generally *thick, and sticky.* The authors of this paper, adding to the Kim and Mauborgne (2017) ocean metaphor, note that there is a transition zone between Red and Blue Oceans. A *Purple Ocean* (See Figure 1) - blending of the colors red and blue – is where businesses transition from price competition toward, yet not fully realized, complex value differentiation. In Figure 1, approximately 20% of a company's customers are conceptualized to be in this transition zone.

Hotel B2B Sales Context

Approximately 10 years ago, the two largest global hotel corporations – USA-based and size measured in number of rooms and number of countries served (Hotels, 2017) – began redesigning their corporate-wide approach to B2B sales and marketing (Bartlett, 2010; Lodrige-Kover & Parke, 2006). These hotel corporations followed the lead of innovative, leading, and exemplar non-hotel corporations. They were motivated by rising marketing/selling costs, enabled by advancing digital technological capabilities, and empowered by their rising global hospitality market dominance facilitated by a stunning rapidity of mergers/acquisitions and expanded hotel brand portfolios. Guided by theory, the *Evolving Hotel Sales B2B Go-to-Market Model* (See Figure 1) proposed in this paper, synthesizes industry practices from both generic corporations and from these two largest global hotel corporation pioneers.

Re-Conceptualization of the Word, Sales. These two hotel corporations began a journey toward rethinking and redesigning traditional B2B sales/marketing and expanding the very meaning of the word, *sales,* to be re-conceptualized as *value-exchange management* between organizations. *Sales* and *selling* can be re-conceptualized into management of the exchange of value as depicted in Figure 1 and elaborated on in the previous section.

In the *Transactional* mode of value-exchange management (selling by a salesperson), basic and simple buying and selling of a product/service is definitely an exchange of value: the buyer receives value intrinsic to the product while the seller usually receives monetary value. This is an exchange primarily based on price and even the most novice salesperson is the manager of this value-exchange process.

In the *Consultative* mode of value-exchange management, the foundational transactional mode is enhanced and transformed by increasing buyer/seller inter-organizational integration, relationship strength, and increasing quantitative and qualitative value attributes involved in this value-exchange. A salesperson selling in this mode is a more sophisticated manager of this, now more complex, value-exchange process.

In the *Collaborative* mode, increasing relationship strength, integration, and number of co-created value attributes are exchanged between parties. Again, the increasingly complex value-exchange process requires involved management. No longer a collaborative salesperson; a collaborative value-exchange manager is born.

In the final *Strategic* mode of value-exchange, the inter-organizational integration state-of-existence becomes analogous to a human formal marriage where relationship strengths are high and integration deep and wide, as mentioned before. Here, customers are reclassified into *Strategic Accounts* (national, multinational and global) and total value-exchanged between the buyer and seller organizations involves multiple and mutually agreed upon values, particularly functional and psychological as discussed previously. These multiple values include: process integration synergies, high trust, mutuality, accessibility, to mention a few. In the Strategic mode, no longer are these customer/accounts *sold-to* on a product/service by product/service basis as occurs in transactional, consultative, and collaborative modes. Total value is exchanged. This value-exchange management process is implemented by *Strategic Account Managers* (SAMs).

The 80%/20% Principle: Partitioning Corporate Hotel B2B Customers. The group and meetings segment of hotel B2B business is a significant percentage of total hotel top-line revenue; this can range to 50% and higher in the top three STR (Smith Travel Research Global) chain scales (classifications) of global corporate hotel brands (STR, 2017). The two largest global hotel corporations recognized that approximately 80% of their B2B engaged customers delivered only about 20% of their corporate-wide hotel and B2B revenue while 20% of their existing and accessible customers could potentially deliver 80% of their B2B revenue. In response, around 2006 they began to restructure their B2B marketing and sales organizations (Bartlett, 2010; Lodrige-Kover & Parke, 2006). Their business strategy appears to be: (i) Dramatically reducing costs associated with pursuing and acquiring the 80% of B2B lower revenue producing customers and (ii) Invest in the long-term acquisition and retention of the 20% of B2B major important revenue producing customers. Reportedly, their journey has been iterative with set-backs and periodic readjustments (HSMAI, 2018, February 8). In practice, attempts to achieve the aforementioned 80%/20% business strategy have yet to solidify. Therefore, it is not surprising that a chasm between hotel B2B sales/marketing evolving practice and lagging academic theory remains.

Emerging Hotel Industry Practice. Emerging hotel B2B sales/marketing practice – especially as exemplified and modeled by the two largest global hotel corporations – appears to, first, converge the traditional roles of the sales and marketing functions while disaggregating *pricing* from the marketing structure. Second, bifurcate both traditional marketing structures and traditional personal B2B sales structures. Here, the 80% of corporate customers generating 20% of B2B revenue are engaged at the least possible cost - primarily facilitated by intensive use of digital technology. Third, these hotel corporations focus on selected strategic customer accounts. The emerging hotel B2B sales/marketing practice aspires to significantly invest in and partner with the 20% of customers who generate not only 80% of B2B revenue, but also significant other value to both buyer and seller corporate partners.

First, *convergence* is discussed. Traditionally and in the pre-digital world, the marketing function ideally generated prospective customer leads (*prospects)* which were then handed-off to a personal salesforce who would engage with these prospects to continue the process to convert them into contract signed customers. This was an ideal world as salespeople, who were accountable to quota production of contracted revenue production, openly distrusted the marketing function to quantitatively and qualitatively complete this prospect-generation function. Thus, salespeople actively sought their own prospects through telephone cold-calling and other means. Salespeople refused to leave their quota-accountability-fate in the hands of the marketing function. Additionally, the marketing function included strong control over pricing.

In today's digital world, a welcome convergence between sales and marketing is taking place as sophisticated software unifies the pre-digital ideal of both marketing and sales to work seamlessly to generate corporate top-line revenue. This unification and importance of better use of the marketing function to generate prospects is vital as buyers seek seller information on the Internet and refuse to accept sales people making telephone cold-calls. Particularly in the hotel industry, the pricing function, traditionally a domain of marketing, has been subsumed by increasing power of *Revenue Managers* using sophisticated software to forecast future buyer demand and set ever fluctuating pricing.

Second, *bifurcation* is addressed. The marketing function is bifurcating. Marketing is a *pull* function (pulling prospects inbound to the corporation) whose goal is to create and maintain corporate image and to attract and generate potential customers (prospects) who will either directly make purchases or will be further intermediated and developed by a personal sales function. Today's emerging corporate hotel marketing structure can be conceptualized as dividing into two parts: (i) *Traditional marketing* functions such as segmentation, targeting, and positioning and (ii) *Inbound marketing* where total corporate hotel brands their global locations are accessed by prospective customers and through an Internet-based hotel corporate "Digital Marketing Demand Generation Machine" (DMDGM) (a neologism by the authors of this paper). Comprising and servicing the DMDGM are corporate inbound digital marketing specialists who manage the corporate website, produce blogs, engage in hotel reputation management of online customer reviews, monitor and enhance social media sites, engage in search engine organic and paid placement, and the like. The primary purpose of the DMDGM is to inexpensively pull and attract the general (80% of customers) hotel B2B customers.

The personal sales function is also bifurcating. Personal B2B sales is generally a push function. Here, salespeople interact with buyers in value-exchange modes i.e. Transactional, *Consultative, and Collaborative* (see

Figure 1) to the DMDGM *pulled* prospects. The sales structure is organized into two distinct salesforces: (i) *Inbound Sales* where novice and potentially rising salespeople officed at regional centers the authors analogously label, *Cube-Farms* (think: regional reservation center specifically for B2B group business) respond to incoming B2B potential customer leads pulled by the DMDGM – they tend to sell in a transactional mode and at basic-level consultative mode, (ii) *Property-Level Sales* where traditional salespeople have long-been officed in larger properties with significant meeting-room space; they tend to sell in higher-level consultative mode and in collaborative modes. NOTE: As mentioned earlier, the word *sales* is being re-conceptualized as *value-exchange management.*

Combining convergence and bifurcation facilitates the first business strategy of the two largest hotel corporations as mentioned above: Dramatically reduce costs associated with pursuing and acquiring the 80% of B2B less revenue productive customers. How? The DMDGM inexpensively generates prospects; the expensive use of traditional salespeople to prospect by telephone or other means is reduced by means of digital inbound marketing. The inbound salesforce at the regional *Cube-Farms* 'take orders' from incoming prospects inquiring to purchase smaller group/meeting business. Larger group/meeting business prospect inquiries are redirected by the DMDGM system to specific geographically situated property-level salespeople. Thus, overall sales/marketing costs are reduced.

Third the focus on *strategic customer accounts* is discussed. The *Strategic* mode in Figure 1 contains *Strategic Accounts* who are the most important revenue producing and other reciprocal value generating customer accounts. These are the 20% of all customers who generate 80% of buyer/seller value exchange. There are no salespeople here, but managers – *Strategic Account Managers* (SAMs) as mentioned earlier. These are highly selected strategic customer accounts and managed by SAMs and cross-functional teams often in a matrix management structure. There are no former or present salespeople at the SAM corporate offices. Selected property-level salespeople, when required, have a matrix reporting structure: a solid reporting line to their local and geographically distributed hotel and a dashed reporting line to the SAM and the strategic account team. For example, one SAM may manage one global account, such as a major global company. This major global company, with divisions located in multiple countries throughout the world may wish to hold a meeting/conference with their hotel corporate strategic partner which is equally globally distributed. The hotel corporate SAM, being totally responsible for managing relationships with this major global strategic account, will ensure that the major global account's specific division will be put in contact with that division's desired geographically located hotel property-level collaborative mode salesperson where the meeting/conference contract can be locally negotiated.

Focusing on strategic customer accounts facilitates the second business strategy of the two largest hotel corporations as mentioned above: Invest in the long-term acquisition and retention of the 20% of B2B major revenue productive customers. Why? Because share of business dramatically increases with effective strategic account programs. For example, one of the two largest global hotel corporations reported that five years after the launch of their strategic account program, "… share of business from strategic accounts has increased by nearly 40 percent" (Bartlett, 2010).

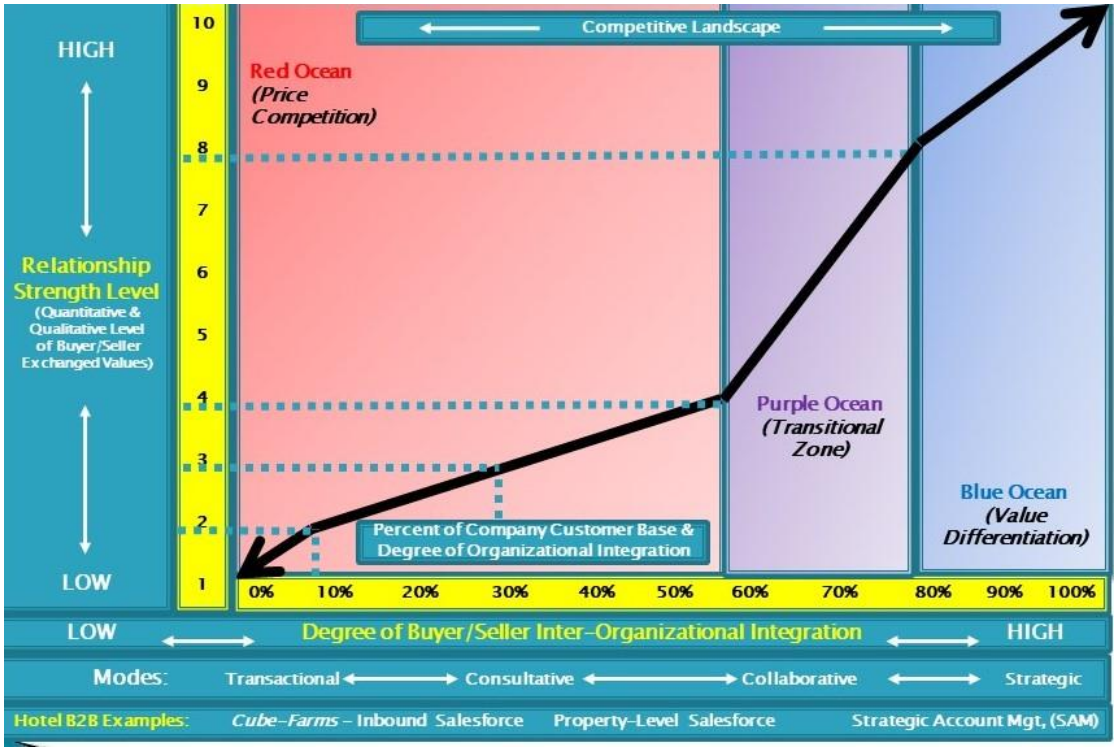
A Proposed Hotel B2B Sales Model

Based on the above discussion, a proposed evolving hotel B2B sales model is illustrated in Figure 1, below. Caveat: This proposed model is limited to major, usually globally distributed, hotel corporations which engage with B2B customers. However, less resourced hotel organizations can adapt many of the concepts, albeit, to a less intensive degree.

Figure 1 is discussed in this section. *Relationship Strength Level* on the Y axis is in a *potential* state (1 – 10) until *actualized* by the *Degree of Inter-Organization Integration* on the X axis where the scale, 0% - 100%. The Y axis scale simultaneously measures two things: (i) the scale measures the degree of buyer/seller value being exchanged and mutually integrated with each other and (ii) the percentage of customers/accounts engaged by the seller. In short, buyer and sellers each have desired values that only ideally exist until both parties actually engage with each other and, then begin to exchange these values.

The intersection of the Y and X scales metrics develops a positively rising line which describes various selling or value-exchange modes labeled along the X axis: *Transactional*, *Consultative*, *Collaborative*, and *Strategic.* Corresponding to the mode labels and, also on the X axis, are examples of hotel B2B types of salesforces i.e. Cube-Farm, Property-Level, and Strategic Account Management. Further, there are three zones covering 100% of a company's customers/accounts in the competitive landscape:
(1) *Red Ocean* – a 60% zone of price competition – bloody waters - where approximately 10% of low revenue producing customers engage in a transactional mode and 50% of customers engage in a rising low to high consultative mode;
(2) *Purple Ocean* – a 20% transition zone - exiting the red waters and entering the clear and blue waters - where 20% of the previously low revenue producing customers are rising in importance. Here the value-exchange process (selling process) is converting from a consultative mode, and through a collaborative mode and, finally, advancing toward a strategic mode; and
(3) *Blue Ocean* – a 20% value differentiation zone – waters now clear of both bloody competition and transitional residue. Here sellers attain and integrate with their 20% of important revenue producing customers who are now renamed, *strategic accounts*.

Figure 1. Evolving Hotel B2B Sales Model



Source: The Authors

Figure 1's positively rising line, which traverses red, purple, and blue ocean zones, describes key thresholds: The transactional mode of selling is exited at relationship *potential* level - 2 and integration *reality* level - 10% (and approximately 10% of a company's customer base). From this point, the consultative mode is entered and rises in sophistication until reaching relationship *potential* level - 4 and integration *reality* level - 60%. Entering the collaboration mode, the rising line continues until it exits at relationship *potential* level - 8 and integration *reality* level - 80%. Entering the strategic mode, Blue Ocean of strategic accounts, the line continues to rise until the remaining top 20% of a company's most important accounts are fully captured. NOTE: The double directional arrows in Figure 1 indicate two-way dynamism: Strategic modes may regress to other less complex modes; relationship strengths vary, inter-organizational integration may lessen or increase, and regular customers/accounts

may be selected and deselected. A synthesized and representative example of a major corporate hotel B2B sales model summarizes Figure 1:

Transactional value-exchange mode practiced by the hotel *Cube-Farms* are at very low relationship strength, level, 1 to 2 and low integration degree levels, 0% to 10%.

Consultative value-exchange mode practiced by both the hotel *Cube-Farm* are at relationship strength, level, 2 to 3 and integration degree levels, 10% to 30%, and practiced at the property-level salesforce at relationship strength, levels, 3 to 4 and integration degree levels, 30% to 60%.

Collaborative value-exchange mode practiced by the property-level salesforce are at relationship strength, levels, 4 to 8 and integration degree levels, 60% to 80%. Note: During the collaborative mode and due to the rising relationship strength and degree of integration, several of the company's customers are being carefully considered as targets for selection and reclassification as strategic accounts – advanced to the strategic mode.

Strategic value-exchange mode practiced by the *Strategic Account Manager* (SAM) are at relationship strength, levels, 8 to 10 and integration degree levels, 80% to 100%. Here product/service selling is vital, yet is only one value in a total population of many and complex values that are exchanged between buying and selling organizations. This mode is managed by a SAM is empowered by the top levels of the organization. The SAM orchestrates a company-wide team of functional experts reporting through a matrix management structure (two lines of reporting; one a formal solid line and one an informal dashed line). SAMs do not personal sell products/services; they orchestrate total inter-organizational relationship/value integration. A property-level salesperson is an *ad hoc* team member who, when called upon by the SAM, actually negotiates a buyer/seller value-exchange (selling) process).

CONCLUSIONS AND RECOMMENDATIONS

This paper endeavored to integrate the fragmented body of B2B sales knowledge into a systematic whole, while reducing the theory practice gap as illustrated in the synthesized hotel B2B sales model. Figure 1 proposes a model to describe the major interactive components of today's evolved hotel B2B sales practice. In addition, ambiguous constructs like relationships are clarified, as they pertain to hotel B2B sales. The synthesis, reducing of the theory-practice gap and clarification of ambiguous concepts are the contribution of this paper. As such, the paper answered the research question. Implications, include that selling organizations need to carefully select buying partners according to the mutually agreed upon values to be exchanged in the different modes. A limitation of this paper is that the proposed hotel B2B sales model is based on major US hotel corporations with global distribution. Though, smaller hotels can replicate some of the ideas e.g. 20-80% selectively. Another limitation is the nature of the constructs – most if not all are multi-dimensional and interwoven, making them complex. The complexity of constructs challenges the advancement of theory. The limitations are the basis for our recommendation for further study. In addition, future research remains to detail each of the components in the proposed hotel B2B sales model and whether and to what degree the model can be useful to especially smaller and less resourced hotel corporations.

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HOW DOES COUNTRY RISK MATTER?

Eric Girard

ABSTRACT

The paper explores the information content of country risk ratings and provides a methodology to compute equity risk premia in countries with or without capital markets. The data used in the study consists of (1) total return indices from MSCI and EMDB for 85 capital markets, (2) Fama and French global risk premia, and (3) ICRG composite, political, economic, and financial country risk ratings for a period starting in January 1985 and ending in January 2017. After orthogonalizing each market's total return with global factors, portfolios of markets are sorted into quantiles of composite, political, economic, and financial country risk ratings. The paper shows that (1) portfolios of countries with lower ratings have orthogonalized returns statistically greater than those with higher ratings, and (2) this "low-minus-high" (LMH, hereafter) rating premium is larger than and uncorrelated with global risk premia. Finally, the paper provides a methodology for benchmarking the equity risk premium for countries with or without a capital market; estimates are compared to published equity risk premia. That is, the relationship between country risk premium and risk rating is calibrated with data prior the great recession; then, the equity risk premium of one hundred and forty countries are implied using risk ratings for 2017 and compared to concurrently published equity risk premia. Findings show no statistical difference in measurement between equity risk premia calibrated with an earlier estimation period and the ones recently reported by publicly available sources. The article concludes that country risk premia, proxied by global-factor-orthogonalized LMH, are non-diversifiable, compensate for the lack of regional integration, and can be used to estimate the equity risk premium for countries without capital markets.

Keywords: Country risk premium, country risk rating, multifactor model, asset pricing, equity valuation

INTRODUCTION

The evaluation of the equity risk premium (ERP, hereafter) is one of the most critical elements in any business valuation. For instance, if future levered free cash flows are expected to decrease by a percent, the stock price will also decrease by a percent; however, an increase of a percent in the cost of equity will result into a decrease in equity value equal to a multiple—the stock duration--of a percent. Consequently, the uncertainty associated with the measurement of the cost of equity leads to far more valuation variations than the uncertainty related to future operating margins, net working capital spending, and capital expenditures. The lack of confidence in the measurement of ERP is even more significant when a country has no capital or bond market, high sovereign risk, poor corporate governance, and crony accounting practices.

Any heuristic approach to model ERP must have not only a theoretical underpinning but also have reliable and observable input. There are mainly two views on how to estimate ERPs: the academics and the practitioners' approaches. Academics advocate for theoretically sound factor models using common global and local factors calibrated with market and company data; some examples include the local CAPM, global CAPM, Fama-French's 3-factor CAPM, Fama-French's 5-factor CAPM, and Clare-Kaplan's globally nested CAPM. Practitioners compute ERPs by tweaking factor models using not only market and accounting data but also proxying input with ratings and surveys. For instance, Damodaran's model is essentially a two-factor pricing model where CRP is estimated by factoring a country's interest spread with the relative volatility of its local equity and bond markets. The model's

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inputs consist of a mixture of market-based and sovereign rating data. Other approaches extrapolate market risk premia using a pricing matrix built with economic, financial, and political ratings or estimates from surveys.

Opponents to the practitioners' view argue that (1) an "intuitive tweaking" of a common factor is not considered as a theoretically sound methodology, and (2) there is no such thing as a country risk premium since it can be diversified away. Proponents claim that the idea of single global equity risk premium suiting any markets is unrealistic since (1) local investors have a significant home bias and (2) cross-market correlations increase dramatically when diversification is most needed—i.e., in down-trending markets.

Empirical evidence strongly suggests that CRPs are real and remain non-diversifiable. Indeed, many articles have reported that companies traded in emerging markets have both higher average returns and more volatility than those traded in developed markets. Furthermore, forward estimates from surveyed academics, analysts and companies report higher average premiums for riskier emerging markets (Fernandez et al., 2018). It means that those who value global equities believe there should be a compensation for country risk differentials—i.e., differentials in liquidity, fund flow volatility and restrictions, investability restrictions, information access, propensity for cronyism, and the likelihood of rare events.

Supposing that CRP is priced across markets, then its measurement is a more significant problem: First, data are not always reliable or observable; second, all ERP models are calibrated over different periods and using different econometric techniques, leading to different estimates (Kruschwitz et al., 2012; Damodaran, 2018). To illustrate the problem, consider these two observations:

> (i) The MSCI EM (emerging market index) returned 11.2% more than the MSCI world index (developed market index) from 1999 to 2006, both indices lost approximately 21% from 2007 to 2009, and the MSCI world yielded 3% more than the MSCI EM index from 2009 to 2016.
> (ii) During the same periods, public companies in emerging and frontier markets reported operating income CAGR higher than public companies traded in developed markets by 2.8% from 1999 to 2006, 15.0% from 2007 to 2009, and 1.5% from 2009 to 2016.[1]

Profitability is strongly related to average stock return in the U.S. (Novy-Marx, 2012); yet, it is not necessarily true in emerging and frontier markets. This observation has been echoed by numerous researchers. For instance, Wang and Xu (2004), Girard (2008, 2010), and Brockman, Schutte, and Yu (2012) find that global fundamentals fail to explain emerging and frontier markets' systematic risk. They provide cogent arguments for their findings—e.g., crony market behaviors, investments restrictions, and questionable financial reporting. In sum, while global risk premia reasonably describe the equity return generating-process in developed markets, there is little consensus on the nature and importance of local risk premia in the partially integrated emerging and frontier markets.

Besides the issue of data reliability, ERPs computed using fundamental or market-based data are not observable in countries where there is no capital market, bond market, too short of a history of data coverage, or with very few publicly traded firms. Erb, Harvey, and Viskanta (1996a, 1996b) pioneered a solution to both data reliability and availability problems by using country risk ratings as a proxy for risk. Although the idea behind a relationship between ratings and premia is intuitive, it has two main flaws. First, the authors calibrate their model with ten years of data from 45 capital markets. Since asset pricing models are usually calibrated over a long period and a broad cross-section of countries with quality stock market data, the long-run persistence of their findings could be disputed. Second, there is no evidence that their empirical approach is nested into an asset pricing model. Indeed, one can only wonder whether the relationship between ratings and returns is spurious since there is no indication of the existence of a risk rating premium.

The purpose of this article is to provide a methodology to compute Equity Risk Premia (ERP, hereafter) in countries with or without capital markets. Specifically, the following two questions are answered: First, is the size of

[1] Total returns and operating income data are obtained from Capital IQ®; average operating income CAGR are computed from 8,577 (5,870) delisted and operating companies traded in developed (emerging) markets between 1999 and 2016.

CRP inversely related to country risk ratings? Second, can ERP be measured as the sum of a referential Global Risk Premium (GRP, hereafter) and CRP?

Country risk rating premia are estimated using 85 capital markets total country index returns orthogonalized with common global factors and sorted based on composite, political, economic, and financial country risk ratings. The first question is examined by determining whether these premia are significantly priced across markets, and how they correlate with five Fama-French global risk premia. The second question is addressed by comparing published ERPs to estimates implied from country risk rating premia. That is, the relationship between CRP and risk rating is calibrated using an earlier estimation period; then, 140 countries' ERPs are implied with current risk ratings and compared to concurrently published ERPs.

The paper is organized as follows: The first section outlines the main findings in the literature. In the section after that, the data used is presented. The following section describes the methodology used to investigate the pricing of risk ratings across all capital markets. The subsequent section presents the results. Concluding remarks are offered in the final section.

LITERATURE REVIEW

There is a plethora of models to compute a country's ERP. All of them are nested into a generalized model stating that the equity risk premium is a function of a set of local and global factors, which relative importance is inversely related to market integration. For instance, the equity risk premium is reduced to a multiple of global risk premia in the highly integrated developed markets. In the partially integrated emerging and frontier markets, a country risk premium is augmented by a local premium reflecting excess political, economic, and financial risk relative to what is found in an integrated market.

The existence of fundamental global factors such as market, size, value, and momentum premia is well established in developed markets. For instance, Fama and French (2015) propose that global risk premia be computed using a set of five fundamental factors—i.e., market risk, size, value, profitability, and investment patterns premia. Even if their model fails to capture the low average returns on smaller stocks with low profitability and significant capital expenditures, it outperforms its predecessor--the three-factor CAPM. To date, no research has rejected Fama and French's latest five-factor CAPM in developed markets. Accordingly, if a market is integrated, a multifactor model with Fama and French's common factors is appropriate.

The idea that CRPs are diversifiable has been debunked over the past three decades. For instance, Ball, C. and W. Torous (2000) and Yang, Tapon and Sun (2006) find that an increase in cross-market correlations does not fully explain the difference in risk premia. Indeed, there is ample evidence that risk impacts return in a state-dependent manner leading to a higher correlation between global equity markets in bear markets than in bull markets—i.e., co-movement is at its highest during periods of extreme volatility, when diversification is most needed. This leverage effect, described in Black (1976) and Longin and Solnik (2001), consists of two inter-related phenomena: (1) volatility is at its highest in bear markets, and (2) downside volatility increases cross-market correlations.

If betas estimated against local indices fail to capture global risk entirely, betas estimated against the value-weighted world market index fail to capture country risk. Indeed, the returns of companies traded in developed markets are more correlated with a global index and have higher betas than the companies traded in emerging markets. As stated by Brogaard et al. (2014), this assertion is illogical since the cost of capital of companies in integrated markets is mostly affected by global uncertainty and smaller than in segmented markets. On the other hand, companies in segmented markets are influenced by both global and domestic factors.

There is no consensus among academics and practitioners on an optimal approach to measure country risk premia in the partially integrated emerging and frontier markets. Wang and Xu (2004) assert that the reliability of accounting information is questionable in emerging markets. Thus, fundamental valuation information coming

from the "book" is not as essential as in mature markets. Bekaert, Harvey, and Lundblad (2007) find that (1) local market liquidity is an important driver of expected returns in emerging markets and (2) the increase in integration has not eliminated its impact. Girard (2010) investigates the pricing of 3,782 companies traded in 29 emerging markets from 1988 to 2006; he rejects the three-factor CAPM in many emerging and frontier markets. The author attributes his findings to emerging markets' poor corporate governance, crony accounting practice, market manipulation, short-selling restrictions, and insider trading problems. He also shows that there exists a premium in markets with restricted openness to foreign investors. Lau, Ng, and Zhang (2011) look at time series variation in risk premiums in 41 countries and conclude that countries with more information disclosure (less crony) have less volatile risk premiums and that the importance of information is heightened during crises. De Groot, Pang, and Swinkels (2012) find some evidence of value and momentum effects in frontier markets. Brockman, Schutte, and Yu (2012) find that stocks with higher unsystematic risk realize higher returns in emerging and frontier markets. This important result suggests that models using global fundamentals fail to capture some systematic local risk factors. Zaremba (2015) uses the indices of 78 countries over the period 1999–2014. The author finds evidence of value, size and momentum effects at the country level. He further suggests that the importance of these local fundamental factors is stronger in small and medium country markets than large ones. Barro and Jin (2017) estimate a model with rare events and long-run risks, using long-term consumption data for 42 countries, and argue that variations in equity risk premiums come from shifts in the assessed likelihood of rare events. In sum, evidence suggests that a country risk premium exists and compensates for integration differentials between countries—i.e., differentials in liquidity, fund flow volatility and restrictions, investability, information access, propensity for cronyism, and the likelihood of rare events.

CRP can only be estimated empirically and practitioners tend to use one of the two following approaches: (i) implied CRP using interest spreads, and (ii) matrix pricing (extrapolating) based on ratings and surveys. For instance, the Damodaran method (2018) consists of computing a country's ERP by combining the risk premium of an integrated market with a country risk premium. The risk premium in the integrated market is estimated with a dividend discount model, and CRPs are measured by factoring sovereign spread with the relative volatility of the local equity and bond markets. Spreads are estimated using proxies such as default bond spreads, credit default swap rates, cap rates, or matrix pricing with Moody's sovereign ratings or PRS country risk ratings, whichever is available. This method is intuitive, adopted by the CFA Institute, and widely used by practitioners. However, as Kruschwitz et al. (2012) argue, it has no theoretical underpinning.

The PRS group, one of the leading providers of country risk data, estimate ERPs based on the work of Erb, Harvey, and Viskanta (1996a, 1996b). The authors investigate country risk ratings as a proxy for risk; these ratings are composites of survey-based political, economic, and financial scores, and are used to capture a country's sovereign risk as well as its market's sensitivity to global economic shocks. They find that (i) country ratings proxy for many of the fundamental risks, and (ii), in contrast to the traditional backward-looking measurement of risks, ratings are forward-looking and dynamically changes through time. They fit a model using the equity data in 47 countries and the associated credit ratings, then extrapolate the rates of return in the 88 countries without equity markets. In a later paper, Harvey (2004) asserts that country risk ratings are inversely related to market volatility and correlated with future equity returns in emerging markets. The author concludes that the excess premia required to invest in less developed markets can be evaluated using country risk ratings. Girard and Sinha (2008) and Girard (2010) corroborated Harvey's findings by showing that there is foreign investment restrictions premium in emerging and frontier markets, and the value of this premium is inversely related to country risk ratings.

Damodaran (2018) compares estimates of January 2013 ERPs using surveys, historical premium, and the implied premium approach. The author finds that all approaches yield different numbers. He further suggests that the choice of a premium depends upon the forecast period, markets efficiency, and the purpose of the analysis. In short, the size of any observed country risk premium depends on the methodology employed. As Kruschwitz et al. (2012) argue, it follows that the evaluation of a required rate of return using country risk premium is somewhat arbitrary, meaning that equities could be systematically misevaluated.

DATA

The study uses data from 85 markets for a period spanning from January 1985 to January 2017. Country risk ratings are obtained from the International Country Risk Guide (ICRG). ICRG assesses a country risk based on

four dimensions – composite, political, economic and financial. Each dimension is measured using several risk ratings. The political risk dimension is measured using twelve ratings, and the economics and financial risk dimensions are measured using five ratings each. The ICRG scale for each rating is calibrated such that a high score indicates low risk and a low score means high risk. The ICRG system brings the political, economic and financial risk scores together to compute a composite risk score for a country. This composite risk score is, therefore, a weighted average of political, economic and financial risk ratings —approximately 54% political, 23% economic, and 23% financial.

Since ICRG risk ratings are available since late 1984, monthly total return for all available developed and emerging capital markets are estimated from 1985:01 to 2017:01. Total returns are computed using Morgan Stanley Capital International (MSCI) and the Emerging Markets Data Bank (EMDB) index series. For the period preceding the 2008 crisis, the source for an index series is chosen based on the length of coverage—i.e., all developed markets and few emerging market series total returns are obtained using MSCI indices, and most of emerging markets total return index series are computed from EMDB index series.[2] For the post-crisis period (2008:09 to 2017:01), only MSCI index series are used. As in Rouwenhorst (1999) and Girard (2010), total returns are calculated from U.S. Dollar-denominated indices to circumvent the problem of distortion due to high inflation.

The sample includes 23 developed and 62 emerging markets. A summary of descriptive statistics is shown in Table 1. The lowest number of markets available for any given month is 36 (January 1985 to December 1987), and the largest is 83 (2011:01 to 2017:01). Table 1 shows the familiar pattern of higher standard deviations, and lower ratings for emerging markets. These statistics are in line with findings in other studies. Interestingly, the return pattern changes as a result of the great recession (2008-2013) suggesting the existence of a structural break.

			Buy-and-Hold Return		**Composite Risk Rating**	
Period	**Type**	**Number of Countries**	**Mean**	**St. Dev.**	**Mean**	**St. Dev.**
All	Emerging	62	6.57%	38.09%	69.63	3.68
(1985-2017)	Developed	23	7.12%	29.01%	82.18	3.23
All	Emerging	62	10.20%	34.86%	69.43	3.61
(excluding 2008-2013)	Developed	23	9.65%	27.50%	82.68	2.94
1985-2008	Emerging	57	15.48%	34.43%	71.53	3.24
	Developed	23	10.92%	22.45%	83.22	2.75
2013-2017	Emerging	61	-0.52%	31.54%	69.61	2.65
	Developed	23	-1.82%	28.08%	79.86	1.93

Table 1: Descriptive Statistics (Value are per Annum)

The cross-section of volatility and average risk ratings is shown in Figures 1, 2, 3, and 4. Figure 1 highlights the negative relationship between total risk and composite risk ratings. Figures 2, 3, and 4 also show a negative correlation between markets' standard deviations and the three subcomponents of composite rating—i.e., economic risk rating (Figure 2), financial risk rating (Figure 3), and political risk rating (Figure 4). In sum, from 1985 to 2017, markets with higher volatility had lower risk ratings, there should be a risk premium in countries with lower country ratings.

For each country, the number of ratings falling outside a given percent deviation above and below a country's historical median rating is reported in Figure 5. All developed markets (open dots) have ratings that fall within 46 percent of the median historical rating (23% above and below); emerging markets (closed dots) have

[2] The choice for this period is important because it corresponds to the timeframe covered until the S&P/IFC Emerging Market Data Base indices' discontinuation. Furthermore, it coincides with the 'Legacy EMDB' data used in the critical country risk premium studies of Erb, Harvey, and Viskanta (1996a, 1996b), Harvey (2004), Bekaert, Harvey, and Lundblad (2007), Girard and Sinha (2008), Girard (2010), and De Groot W., Pang J., and Swinkels (2012).

ratings that fall within 114 percent of the median rating (57% above and below). This observation shows that ICRG ratings change over time dynamically. For comparison purposes, Moody's, Standard and Poor's, and Fitch's ratings change at a rate of once every 2.5 years for developed markets and once every 2.1 years for emerging markets.[3] Furthermore, the magnitude of the deviation around the median is larger in emerging markets than in developed markets. Harvey (2004) reports a similar finding; he also argues that country risk measures are most useful for the analysis of emerging rather than developed markets.

Fig. 1: Relationship between monthly standard deviation and composite country risk rating.

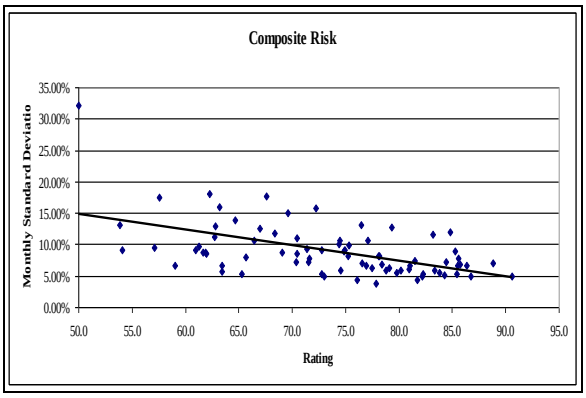


Fig. 2: Relationship between monthly standard deviation and economic country risk rating.

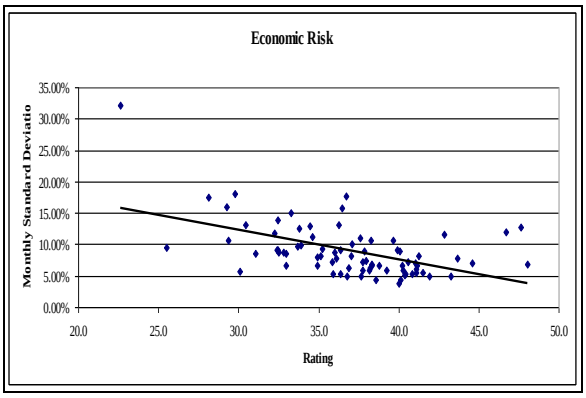


Fig. 3: Relationship between monthly standard deviation and financial country risk rating.

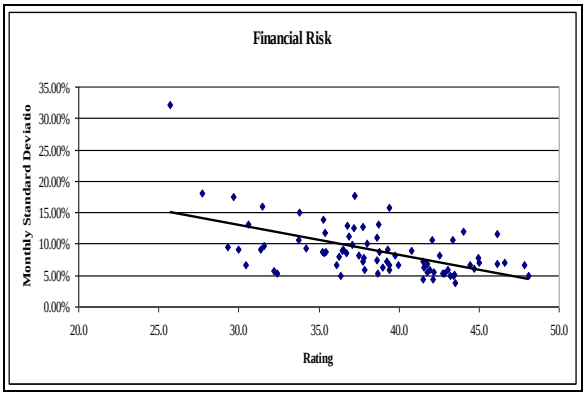
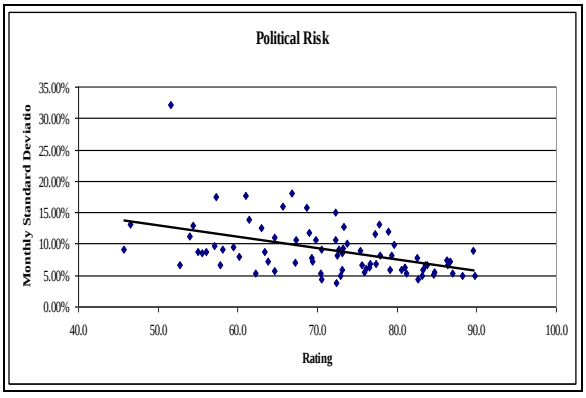
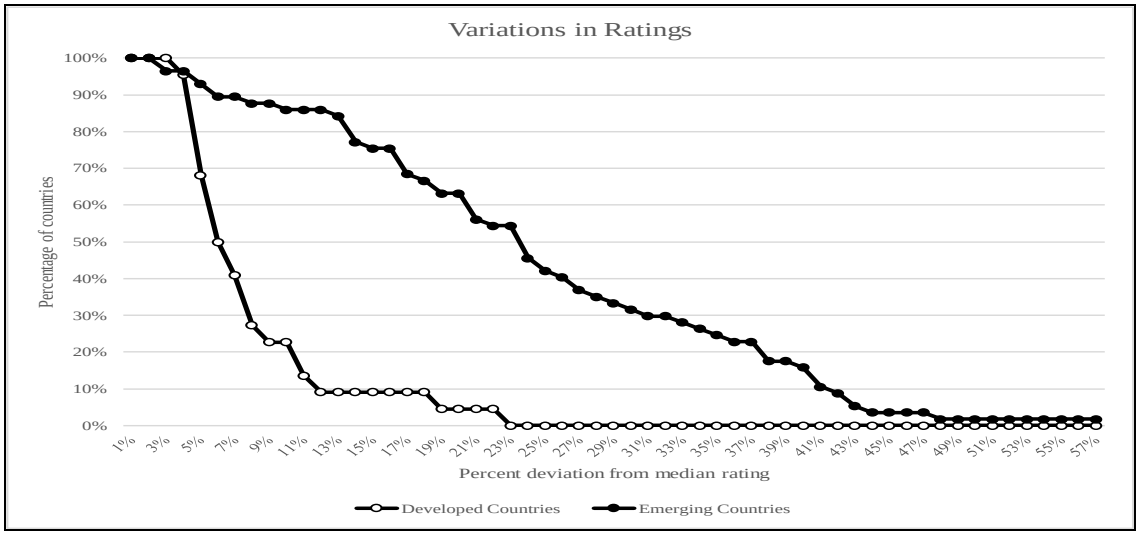


Fig. 4: Relationship between monthly standard deviation and political country risk rating.



[3] These rates are computed using Moody's, Standard and Poor's, and Fitch annual rating data from 1985 to 2017.

Fig. 5: Variations in Monthly Ratings across Countries



METHODOLOGY

For country risk ratings to be priced across capital markets, there should be a common rating risk factor nested into the following generalized equity risk premium model,

$$r_i = \sum_{j=1}^{j=n} LF_{i,j} + \sum_{k=1}^{k=p} \beta_{i,k} GF_k \quad (1)$$

Where r_i is the equity risk premium in country i, $\beta_{i,k}$ is the systematic risk of country i relative to global factor k, $LF_{i,j}$ is a set of local risk premia, and GF_k is a set of global factors.

Equivalently, local and global risk premia can be separated by calibrating equation (1) around a global risk premium—i.e.,

$$r_i = GRP + \sum_{j=1}^{j=n} LF_{i,j} + \sum_{k=1}^{k=p} \beta_{i,k} GF_k^* \quad (2)$$

Where GRP is the equity risk premium in a fully integrated market—e.g., the world market risk premium when the 'average' company making up the world portfolio is neutral to all other global fundamental premia (GF_k). GF_k^* are other global fundamental premia, orthogonalized with the GRP. Equation (2) implies that (i), in any given country, the equity risk premium (r_i) is measured as the sum of the global equity risk premium (GRP) and a country risk premium ($\sum_{j=1}^{j=n} LF_{i,j} + \sum_{k=1}^{k=p} \beta_{i,k} GF_k^*$), and (ii) the size of the country risk premium is inversely related to market integration.

Erb C., Harvey C., and T. Viskanta (1996b) and Girard and Sihna (2008) test the following empirical model to incorporate a country risk rating as a measure of risk,

$$R_i = \alpha_i + \beta_i A_i + \varepsilon_i \quad (3)$$

Where, R_i is the market return; A represents the country risk rating attribute (Erb et al. use the logarithm of the lagged rating, and Girard et al. use rating levels) and $\beta_i A_i$ is the country risk premium.

Once calibrated over a broad cross-section of capital markets, equation (3) provides a benchmark for computing a required rate of return in any country. It is particularly useful in countries without a capital market, where the risk premium can be interpolated using that country's risk rating. Commercial country risk providers, such as the PRS Group, use a similar model to compute equity country risk premia. Although equation (3) is intuitive and appealing, there is no evidence that it is nested into equation (2).

The purpose of this paper is to investigate the existence of a country risk rating premium. If such premium is priced across the world capital markets, equation (2) can be expressed as

$$r_i = GRP + LMH_i \quad (4)$$

Where, r_i is the equity risk premium in country i; GRP is the global risk premium in a fully integrated market where all securities are value-neutral, size-neutral, profitability-neutral, and investment patterns-neutral; LMH (Low-Minus-High) is the country's rating risk premium measured as the difference between the total orthogonalized return of a portfolio of countries with a lower rating and a portfolio of countries with a higher rating. If LMH is positive, statistically significant, and uncorrelated with global risk premia, it must be priced across markets and, therefore, can be used to evaluate the equity risk premium in all countries with a risk rating.

A three-step process is applied to test equation (4):

First, country rating premium are constructed from monthly risk premia orthogonalized with an OLS fit of the Fama and French's "5-factor model"—i.e.,

$$r_{i,t} = \beta_{1,i}RPW_t + \beta_{2,i}SMB_t + \beta_{3,i}HML_t + \beta_{4,i}RMW_t + \beta_{5,i}CMA_t + \varepsilon_{i,t} \quad (5)$$

Where, $r_{i,t}$ is the equity risk premium in country i at time t; RPW is the world risk premium, SMB is the global size premium, HML is the global value premium, RMW is the global profitability premium, CMA is the global investment pattern premium, and $\varepsilon_{i,t}$ is the orthogonalized equity risk premium in country i at time t.[4]

Second, country risk premia are estimated using the same sorting methodology as Rouwenhorst (1999) and Girard (2010). Once computed, the factor's pricing, composition, size, and correlation with global factors are analyzed.

Third, equation (4) is calibrated using pre-crisis data (1985 to 2008), and the equity risk premia of 140 countries are estimated using January 2017 risk ratings. The results are compared to Damodoran's ERP estimates released at the beginning of 2017.[5]

FINDINGS

For all market and each month, a market rating premium is constructed by measuring the difference in orthogonalized total returns between a portfolio of markets with low ratings and a portfolio of markets with high ratings—i.e., Low-Minus-High or "LMH" hereafter. That is, at the beginning of each month, markets with available ranking information are sorted into quintiles, quartiles, and terciles. For each sorting and within each group, orthogonalized total returns are averaged and annualized. The difference between the total return of the bottom and top rating-sorted portfolios is the rating premium. Rating premia are computed for the composite rating (LMH-CR), and its three subcomponents—i.e., economic (LMH-ER), financial (LMH-FR), and political risk rating (LMH-PR). Since ratings can change monthly, the composition of each portfolio also varies each month.

[4] Monthly data for the five factors are available on Kenneth French website (http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html); the series start as of 1990:07. Data from 1985:01 to 1990:06 are backfilled using the average premia from 1990:07 to 2017:01.

[5] Damodaran (2016) propose a methodology to compute equity risk premia in developed and emerging markets using a mixture of empirical techniques based on CDS spread, sovereign volatility spread, relative volatility, and Moody's country ratings. His estimates are publicly available at http://pages.stern.nyu.edu/~adamodar/

All portfolio-sorting statistics are shown in Table 2. Statistics for quintile-sorted, quartile-sorted, and tercile-sorted portfolios annualized orthogonalized total returns are shown in panels A, B, and C, respectively. The last column ("LMH") in the first three panel shows the statistics of the difference between the first (low rating) and last (high rating) portfolio returns; the statistical significance of LMH is estimated using the Newey-West heteroskedasticity and autocorrelation-corrected standard error of that difference. The panel shows that, regardless of the sorting methodology, LMH factors are positive and statistically significant. Consequently, there is a direct relationship between risk rating premia and country returns. LMHCRR and its main sub-component, LMHPRR, are

Table 2: LMH By Quintiles, Quartiles, and Terciles

Panels A, B, and C report annualized orthogonalized total return, "NWSE" is the Newey-West heteroskedasticity and autocorrelation-corrected standard error. "t-stat" is the t-statistic and the marking next to it ("**," and "*") indicates significance at the 99, and 95 percent level, respectively.

	Panel A: Quintiles Sorting						
	Portfolios	1	2	3	4	5	LMH
Composite Risk Rating	Mean Return	20.96%	15.45%	13.20%	13.03%	11.94%	9.02%**
	NWSE	2.28%	2.22%	1.96%	1.82%	1.84%	2.24%
Economic Risk Rating	Mean Return	20.29%	15.59%	11.84%	9.41%	13.11%	7.18%*
	NWSE	3.81%	2.52%	2.38%	2.52%	2.86%	3.70%
Financial Risk Rating	Mean Return	19.43%	14.67%	11.14%	11.89%	12.99%	6.44%*
	NWSE	3.44%	2.94%	2.86%	2.58%	2.41%	3.42%
Political Risk Rating	Mean Return	22.19%	16.45%	14.30%	11.11%	12.89%	9.30%**
	NWSE	2.18%	2.12%	2.02%	1.86%	1.96%	2.30%
	Panel B: Quartiles Sorting						
	Portfolios	1	2	3	4		LMH
Composite Risk Rating	Mean Return	19.96%	14.70%	12.75%	11.88%		8.08%**
	NWSE	2.18%	1.94%	1.86%	1.88%		2.22%
Economic Risk Rating	Mean Return	18.74%	13.85%	12.07%	11.66%		7.08%*
	NWSE	3.25%	2.44%	2.41%	2.77%		3.11%
Financial Risk Rating	Mean Return	18.32%	12.71%	11.61%	12.58%		5.74%*
	NWSE	3.08%	2.69%	2.72%	2.38%		2.93%
Political Risk Rating	Mean Return	20.78%	14.79%	12.94%	12.27%		8.51%**
	NWSE	2.06%	1.90%	1.94%	1.90%		2.05%
	Panel C: Terciles Sorting						
	Portfolios	1	2	3			LMH
Composite Risk Rating	Mean Return	18.95%	13.47%	11.98%			6.97%**
	NWSE	2.02%	1.82%	1.82%			1.94%
Economic Risk Rating	Mean Return	18.94%	12.73%	12.45%			6.49%**
	NWSE	2.83%	2.35%	2.63%			1.86%
Financial Risk Rating	Mean Return	19.16%	11.23%	13.95%			5.21%**
	NWSE	2.02%	1.88%	1.70%			1.85%
Political Risk Rating	Mean Return	19.33%	14.20%	12.74%			6.59%**
	NWSE	1.92%	1.90%	1.84%			1.87%

always statistically significant at least at the 99 percent level; LMHERR and LMHFRR are also significantly priced, but certainty fades as the percentile-sorting increases.

Next, LMH premia and Fama-French global risk premia are compared. For each month, the median of the three LMH-sortings is computed; then, a compounded LMH is calculated for each year. Results are shown in Table 3. Panel A details the correlation of various risk factors using annualized factor data from 1991 to 2017—i.e., 27 observations for each factor.

The lower triangle of the matrix reports the correlation of Fama-French five-factors for developed markets (world risk premium, global SMB, global HML, global RMW, and global CMA) and the four country rating premia (LMHCRR, LMHERR, LMHFRR, and LMHPRR).[6]

Table 3: Comparison between LMH and Fama-French Global Risk Premia

Panel A shows pairwise correlations between risk premia computed using annual data from 1991 to 2017; t-statistics are computed as $R \times (n-2)^{1/2}/(1-R^2)^{1/2} \backsim t(n=27, df=2)$. Panel B provides descriptive statistics on LMH and Fama and French's global factors using annual data from 1991 to 2007. **, and * indicate significance at the 99, and 95 percent level, respectively.

Panel A: Pairwise Correlations between LMH and Fama-French Global Risk Premia Risk Premia

	World MRP	LMHCRR	LMHERR	LMHFRR	LMHPRR	SMB	HML	RMW
LMHCRR	-0.081							
LMHERR	-0.111	0.899**						
LMHFRR	-0.105	0.898**	0.921**					
LMHPRR	-0.072	0.949**	0.802**	0.804**				
SMB	0.195*	0.115	0.131	0.118	0.106			
HML	-0.353*	0.022	0.038	0.025	0.013	0.246*		
RMW	-0.454**	-0.03	-0.012	-0.024	-0.042	-0.427**	-0.003	
CMA	-0.581**	0.046	0.064	0.052	0.035	0.119	0.853**	-0.063

Panel B: LMH and Fama-French Global Risk Premia Statistics

	N	Annualized Mean	SE	t-stat
LMHCRR	33	8.02%	2.13%	3.76**
LMHERR	33	6.92%	2.89%	2.39*
LMHFRR	33	5.80%	2.73%	2.12*
LMHPRR	33	8.13%	2.07%	3.92**
FF-Global Risk Premium	27	7.23%	3.40%	2.13*
FF-Global SMB	27	2.12%	1.59%	1.34
FF-Global HML	27	3.64%	2.42%	1.51
FF-Global RMW	27	4.24%	1.16%	3.67**
FF-Global CMA	27	2.16%	2.09%	1.03

Two principal observations stem from panel A's results: First, the four LMH factors' pairwise correlations are very high and significant, indicating that they capture similar information, are interdependent and possibly reflexive. Since the composite risk rating consists of all three sub-components, it is fair to conclude that a composite rating embeds most of the information necessary to construct LMH. Second, if LMH risk premia seem to encompass some of the information rooted in the SMB factor (the pairwise correlations "SMB-LMHERR," and "SMB-LMHFRR" are significant at the 90% level), they are poorly correlated with global risk premia. The weakly significant correlation between SMB and LMH is logical since emerging, and frontier market companies are

[6] Annual data for the five factors are available on Kenneth French website (http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html); the series start as of 1991.

typically smaller than those found in developed markets (Girard, 2010). The low correlation between LMH premia and global premia indicates that LMH does not duplicate the information included in Fama-French global factors—i.e., the LMH premium does not make the mistake of double counting systematic risk. Furthermore, it indicates that models based on global factors fail to capture local systematic risk effects; this is a significant result that corroborates the findings of Brockman et al. (2012) regarding emerging markets idiosyncratic risk, and Harvey (2004) who argues that country ratings are important in less integrated markets.

As shown in Panel B of Table 3, LMH ranges between 5.8 and 8.13 percent is (1) worth as much as the global market risk premium, and (2) is much larger than the other Fama-French global risk premia; therefore, the equity risk premium in a country with a lower risk rating could be more than twice the size of the equity risk premium in a country with a higher risk rating. For instance, the average company traded in a fully integrated market is size, value, profitability, and investment patterns-neutral has an equity risk premium of 7.23 percent--the world risk premium. The equity risk premium of a company traded in the markets with a low composite risk rating can exceed 15.25 percent –the historical global risk premium of 7.23% plus a country risk premium of 8.02% (using LMHCRR).

Lastly, the output of equation (4) is compared to Damodaran's recent global equity risk premia computations. This is a two-step process: First, the model is calibrated over an estimation period spanning from 1985:01 to 2008:07; second, each country's equity risk premium is computed using country ratings published on 2017:01.

The estimation period spans from January 1985 to July 2008. The period excludes the aftermath of the global 'great recession' of 2008-2013 which, arguably, had lingering effects in many countries after 2013. The exclusion of the post-crisis period is motivated by Dubofsky and Stivers (2017). The authors find evidence of a structural break in 2008; they support their claim with two odd observations from 2008 to 2013: (1) an inverse relationship between equity risk premia and US treasury bond rates, and (2) an inverse relationship between inflation equity risk premia.

The twelve sorted portfolios are matched with corresponding average composite risk ratings. Then, inherent LMHCRR premia[7] are expressed as a quadratic function of the ratings. The reason behind this quadratic fitting is to capture the convexity in the relationship between ratings and risk rating premia. Indeed, as Bekaert et al. (2007) explain, country risk fluctuations can be diversified away in integrated capital markets making the country-risk rating premium very low. In less integrated capital markets, investors face idiosyncratic risks that cannot be diversified away. Thus, the country risk premium gets increasingly greater when these risks become more critical.

Each of the 140 countries' country risk premium is computed using composite risk ratings published on January 2017, then the 'January 2017' global equity risk premium of 6.25 percent is added to obtain each country's ERP.[8] Figure 6 shows the 2017 scatter plot of 140 countries' equity risk premium against corresponding country composite risk ratings for the 'fitted' estimates (open dots), Damodaran's 'reported' estimates (closed dots), and the 12 'observed' LMH plus 6.25 percent (triangles). The R-squared of the regression between both model's ERPs indicates that 56 percent of the fitted estimates' variation explain the variation in Damodaran's ERPs. As shown in Table 4, the overall difference between my ERP estimates and Damodaran's is about 23 basis points; it is not statistically significant at any conventional level. The fitted estimates deviate from Damodaran's ERPs by an average of 10 (40) basis points for countries with ratings below (above) 71; none of these deviations are statistically significant. In conclusion, my model is calibrated with data ten years older than the ones used by Damodaran; yet, ERP estimates are similar to those reported by Damodaran. This significant finding provides further evidence that country rating premia are systematic.

[7] This is the difference between each portfolio sorting and the quintile sorting with the highest average rating—i.e., 3 LMH for the 3 tercile-sorted portfolios, 4 LMH for the 4 quartile-sorted portfolios, and 4 LMH and a 'zero' for the 5 quintile-sorted portfolios. Thus, the data points consist of 11 LMH and their inherent average rating, and 1 'zero" for the portfolio with the highest average rating.

[8] For comparison's sake, the LMH model is scaled with Damodaran's estimate of developed markets' equity risk premium. On January 1st, 2017, he reported 6.25 percent—i.e., the rate is implied by setting the present value of expected earnings, dividends, and buybacks equal to the current S&P 500 index value.

Fig. 6: Cross-Section of Observed, Fitted, and Reported Equity Risk Premia in January 2017

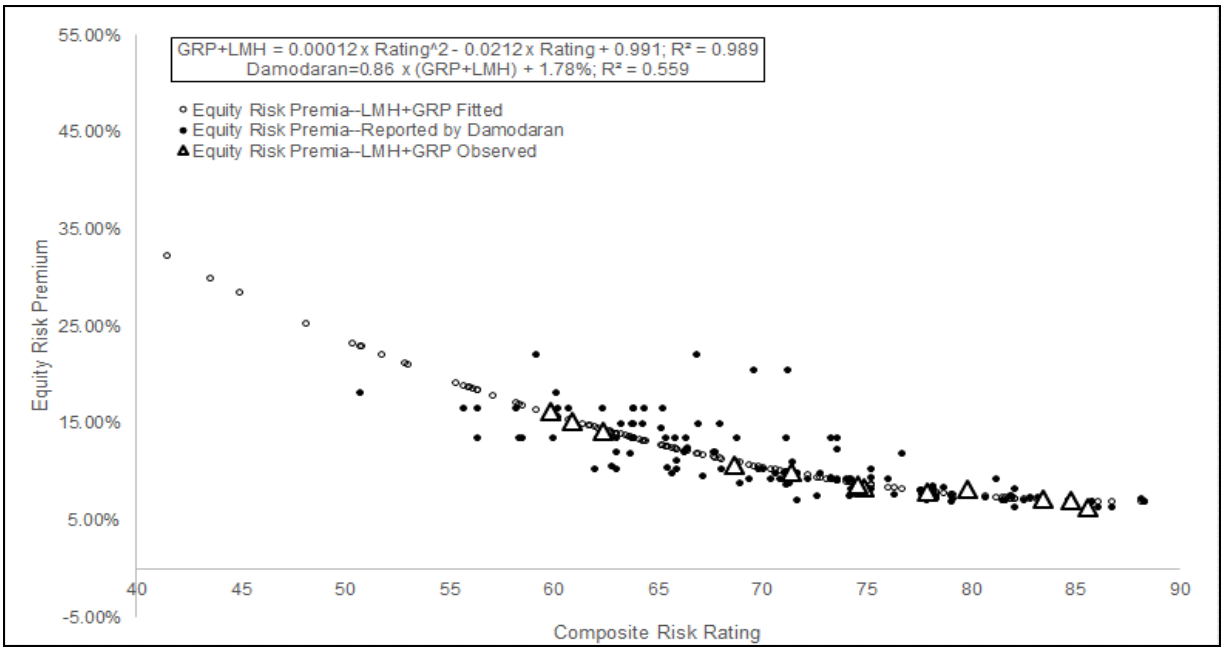


Table 4: Statistics of the difference between the two approaches

Panel A: All Countries				
	CCR	GRP+LMH	Damodaran	Difference
Mean	70.76	10.89%	11.12%	-0.23%
Median	70.94	10.03%	10.16%	0.09%
Max	88.40	22.90%	21.94%	5.00%
Min	50.77	6.86%	6.25%	-10.49%
count				115
Standard Deviation				2.5%
t-statistic				-0.99
Panel B: Top Half Countries (More Developed/highest rating)				
Mean	77.49	8.3%	8.6%	-0.4%
Median	76.73	0.082	0.081	0.000
Max	88.40	9.9%	20.4%	2.7%
Min	71.15	6.9%	6.3%	-10.5%
count	57	57	57	57
Standard Deviation				1.9%
t-statistic				-1.47
Panel C: Bottom Half Countries (Less Developed/lowest rating)				
Mean	64.15	13.5%	13.6%	-0.1%
Median	64.13	13.3%	13.3%	0.3%
Max	70.94	22.9%	21.9%	5.0%
Min	50.77	10.0%	8.8%	-10.1%
count				58
Standard Deviation				3.0%
t-statistic				-0.23

CONCLUDING REMARK

The paper explores the information content of country risk measures and assesses whether they can be used to evaluate equity risk premia in a multifactor framework. Monthly political, financial, economic, and composite risk ratings from the International Country Risk Guide for a period starting in January 1985 and ending in January 2017 are used.

The analysis suggests that the information contained in risk ratings is priced in a cross-section of 85 equity markets. For instance, a portfolio of poorly rated countries has a return approximately 8 percent higher than a portfolio of highly rated countries. Furthermore, this excess return is found to be uncorrelated with Fama-French global fundamental factors. Thereby, country rating risk premia could be used as a common factor to estimate a company's cost of equity.

The model is applied to recently published 2017 ICRG composite ratings. It is calibrated using data before the global 'great recession,' and ERPs are computed in 140 countries with or without a capital market. Estimates are compared to Damodoran's recently published ERPs; the two approaches yield similar equity risk premia.

At any given time, it is impossible to know a 'true' equity risk premium. Thus, it is difficult to assess whether ERP estimates based on ratings are more reliable than those based on market-based and fundamental data. Furthermore, no technique is foolproof, and this is particularly true when evaluating the equity risk premium of a less integrated country. Nevertheless, country risk ratings have several advantages: First, unlike market-based factors, ratings are forward-looking. Second, they change through time much more often than any other sovereign ratings. Third, they can be used to evaluate risk premia for countries without capital and debt markets. Fourth, ICRG ratings change independently from the ones published by Moody's, Standard and Poor's, or Fitch.[9]

Since country risk premia can only be estimated empirically, they should be looked at with skepticism. Two important issues need to be addressed: (1) the methodology employed affects valuation estimates, and (2) country risk premium estimates are arguably too low.

For example, as of January 2017, an 'average' Iraqi company would be valued by discounting its expected cash flows at a rate ranging from 28.7 percent (12.29%[10] cost of debt plus Damodaran's ERP estimate of 16.45%) and 30.62 percent (12.29% plus my ERP estimate of 18.33%). For the valuation of an Iraqi venture providing perpetual cash flows of 100 million U.S. Dollars per annum, the difference in value between the two approaches is almost $22 million or $11 million per percentage point difference—i.e., $100 mil x [1/28.7%-1/30.62%]. This issue has been addressed by Kruschwitz et al. (2012) who argue that the size of any observed country risk premium depends on the methodology employed. It follows that the evaluation of a required rate of return using country risk premium is somewhat arbitrary, meaning that equities could be systematically misevaluated.

Going back to the Iraqi example, is 30% the appropriate discount rate? Consider that the 2017 'average' U.S. company cost of equity ranges from 10.39 percent (3.52%[11] cost of debt plus Damodaran's ERP estimate of 6.87%) and 11.15 percent (3.52% plus my ERP estimate of 7.63%). Subsequently, the same venture located in the U.S would be worth 3.4 to 3.5 times more than the Iraqi one. Looking back at geopolitical uncertainty in Iraq back in early 2017, rational investors would further discount the Iraqi venture. The issue described is a calibration problem: During crises (bubbles), a riskier portfolio will lose (return) more than a safer one. Thus, when premia are estimated, positive and negative premia are averaged out over time. Consequently, the actual size of LMH ought to

[9]This is an issue addressed recently by Alsakka and Gwilym (2010); the authors find interdependence among the sovereign rating changes made by five different agencies—i.e., an agency tends to adjust sovereign ratings based on other agencies' upgrades and downgrades.

[10] 2016 World Bank's estimated average lending rate in Iraq.

[11] 2016 World Bank's estimated average lending rate in the U.S.

be much higher and both approaches tend to overvalue equities in countries with higher economic, financial, and political risk.

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A MODEL OF THE MAJOR FACTORS AFFECTING USER'S INTENTION TO USE M-GOVERNMENT SERVICES IN SAUDI ARABIA: FROM USER'S PERSECTIVE

Ayman N. Alkhaldi

ABSTRACT

The success m-government services implementation can be, only if significant engagement between the government and its people occurred. Attaining adoption of m-government services by people is a serious challenge. To fill this gap, this study developed a research model to investigate the major factors affecting users' intention to use m-government services. A quantitative research approach was utilized. Data was collected using a survey questionnaire. The results discovered that users' awareness was significant to positively affect user's perceived usefulness, as well as, perceived ease of use, but not perceived cost, nor perceived risk. User's mobile experience leaves positive influence on user's perceived usefulness as well as perceived ease of use, and failed to affect perceived risk. Perceived ease of use increases perceived usefulness, but not perceived risk; perceived cost leaves positive effect on perceived risk. Each of perceived usefulness, perceived ease of use, perceived cost, and perceived risk were significant determinants on intention to use m-government services. This study adds to the literature review in the field of m-government, hypothesized potential effect of several factors, and discovered what influences peoples' intention to use m-government. The role of uses' awareness of m-government services as well as their experience in using mobiles. The Saudi government is advised to increase the peoples' awareness about m-government services; guarantee the ease of using m-government, which encourage users to earn greater benefits from using such technology. The Government should pay a consideration to the m-government services' costs and user's feeling of risk. The Saudi government is advised to follow a secure mechanism.

Keywords: m-government, intention to use, technology adoption, mobile services, Saudi Arabia

INTRODUCTION

Mobile government (m-government) implementations can growth government's capability of control in the distant regions, especially in wide countries such as, in Saudi Arabia (Baabdullah et al., 2014). In Saudi Arabia, though there is an emerging tendency among the society towards the adoption of m-government services. Yet, there are limited studies investigating the major factors that influence the intention to use m-government in Saudi Arabia. Most of m-government studies have concentrated on its implementation in developed countries, where the mobile diffusion rate is faultless (Public Service, 2011). Other studies has focused on countries where m-government grow into an essential portion of the delivery of services, such as Singapore, Germany, Hong Kong, and Estonia (Jotischky & Nye, 2012). Some studies explored the m-government in developing countries, but not Saudi Arabia in particular, For example, Yfantis et al., (2013), Al-Hujran, (2012) and Abaza & Saif, (2015). A study by Alssbaiheen, & Love (2015) explored m-government challenges and opportunities in Saudi Arabia in general, not focused on

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major factors that influence users' intention. Alhussain and Drew, (2012) focused on biometric authentication in m-government. Of late, Alharbi, et al., (2017) stated that there are serious issues are constraint m-government successful adoption, especially in Saudi Arabia, and need to be investigated.

Though developing countries are slow in adopting the new technologies, most of their people are familiar with the use of mobile devices. The implementation of m-government is still a problem (Yfantis, et al., 2013). Only handful studies have been carried out about Saudi Arabia, where this channel is still in early stage of adoption. In addition, many empirical studies have focused on mobile services within banking, education, and healthcare, but not government sector (Alssbaiheen, & Love 2015). Such cases are not sufficient reflecting the level of complexity, which is related with offering governmental services via mobile devices to more mixed and complicated party, including citizens, foreigner residents, and tourists (Bouwman, et al., 2008).

Information technology infrastructure is one of the key success factors of e-government implementation in developed and developing countries (Shareef, et al., 2012). However, the success m-government services implementation would be, only if significant engagement between the government and its people occurred. That is, attaining adoption of m-government services by people is a serious challenge (Mpinganjira & Mbango, 2013; Abu-Shanab & Haider, 2015). Therefore, this study aims to fill this gap through a developed conceptual model to examine the major factors affecting users' intention to use m-government services in Saudi Arabia. This study seeks to answer two research questions, these are: What are the major factors that affect users' intention to use m-government services in Saudi Arabia? And how do Saudi's perceive such factors?

LITERATURE REVIEW ON M-GOVERNMENT ESPECIALLY IN SAUDI ARABIA

The use of smartphones is growing year by year in Saudi Arabia. Saudi Arabia is the second biggest market in the Middle East for mobile phone; it's expected that Smartphone penetration rate would rise from 25.01 % at end of 2011 to 48.63 % till end of 2016 (Alsenaidy & Tauseef, 2012). The use of 4G has been ongoing in Saudi Arabia, while only few Middle Eastern countries do active its implementation. Saudi Arabia is in progress to become foremost 4G market among the Middle Eastern countries (Pingdom, 2011). Baabdullah, Alalwan and AlQadi (2018) evaluated the present situation of m-services in Saudi Arabia to provide better understanding about the m-services adoption. They observed low adoption and that there are associated issues (e.g, users' awareness). These issues have been rarely surveyed on m-services in Saudi Arabia. In m-banking services, Onay, Nasır, & Çetin, (2016) reported that informing and updating banks' customers about the convenience of using m-banking will attract more users, thus that customers could not hesitate to use such services. A reported by Statista (2015), reported that 4.61 billion cell phone users in the world, and the number is expected to reach 4.77 billion in 2017, which dominate 65% of the global population in 2017, approximately 60% of these users are living in the developing countries (Geo, Shaikh, & Karjaluoto, 2017). That is, the focus in a developing country (e.g, Saudi Arabia), where a rapid growth in smart phones utilization, and circulation of WAP-supported mobile phones (Hidayat-ur-Rehman, 2014). The mobile Internet subscribers were around 51 million by the end of 2013 (Abdulgahni et al., 2014). Therefore, there is significance of exploring the adoption of m-government in Saudi Arabia (Alwahaishi & Snášel, 2013).

Depends on the above, the existing m-government services provided in Saudi Arabia are found to be appropriate and beneficial. Though m-government offering noticeable benefits to their citizens, foreigner residents, other governments. But, there are serious issues (i.e trust, risk, cost), which are constraint its successful adoption (Ahmad et al., 2014), and especially in Saudi Arabia (Alharbi, et al., 2016). As reported by Alsenaidy and Tauseef (2012), and Assar (2015), after a survey about m-government implementation in Saudi Arabia, that information technology infrastructure availability are sufficient in such country and essential for m-government implementation, but it does not guarantee success m-government implementation. Still the users' side, feeling risky, distrust, perceived additional costs, and low people awareness are the main challenges of accepting m-government in Saudi Arabia. These might be the reasons behind the early stage of m-government services adoption in Saudi Arabia. The Saudi government has played an effective role in enhancing the rapid growth of technology infrastructure, but it appears to have less emphasis on e-government (AlGhamdi et al., 2012; Assar 2015).

As this study focuses on the scope of Saudi Arabia, thus, the current study comes to respond to the calls by Alsenaidy and Tauseef, (2012), who affirmed that broad research from users' perspective is needed to enable success implementation of m-government services in Saudi Arabia.

Alsenaidy and Tauseef, (2012) stated that the contributing factors of m-government implementation are different from a scope to another. They suggested that feeling risk, distrust, perceived additional costs, and low people awareness and experience are the main challenges of m-government in Saudi Arabia. These variables are to be synthesized in investigating the users' intention to use m-government services in the Saudi Arabia. By means of, the literature indicated the expected significant influence of those variables in such country. Most of the selection of these variables is supported by previous studies (e.g Alhussain and Drew, (2012); and Baabdullah et al., (2014)) in m-government services' intention about Saudi Arabia.

DEVELOPMENT OF THE RESEARCH MODEL

The research model is integrating the mobile phone experience, as well as, the awareness of services factors to understand the adoption of m-government within Saudi Arabia. Therefore, the developed model seeking forward to investigate the impact of people's knowledge of m-government and previous experience of using the mobile phone on the perceived usefulness, perceived ease of use, perceived cost, consumer's trust in technology, and perceived risk based on this, we posit as the following sections:

Awareness of Services

Public awareness is a key of success implementation of m-government in developing countries, and associated with some other factors (Al-Hujran 2012). For example, increasing citizens' awareness about cost, use, benefits, legal issues of m-government services is an important step toward improve their trust and encourage them for the adoption of such services (Abu-Shanab, 2014, 2017).

In Saudi Arabia, users' awareness is one of the most significant factors that enable the Saudi Arabia in achieving the adoption of biometric authentication in m-government security (Alhussain & Drew, 2012). Also, Assar (2015) studied the status of m-government services status in Saudi Arabia. He reported that privacy, security and trust issues, and poor programs to promote m-government benefits and provide education are serious challenges that affect the success implementation of m-government services. Assar advised the Saudi government to rise in public awareness and teaching initiatives through seminars, newspapers, television campaigns, brochures, etc., might be crucial to public adoption and to build trust in technology and reveal the advantages and how to use such services. This proves the relevance of awareness with perception of risk in m-government. In contrast, Abaza, and Saif (2015) found that awareness is statistically insignificant to predict the users' intention to use m-government in Egypt.

H1: Awareness of services has positive direct effect on user's perceived usefulness of use m-government.
H2: Awareness of services has positive direct effect on user's perceived ease of use of m-government.
H3: Awareness of services has positive direct effect on user's perceived cost of m-government's services.
H4: Awareness of services has positive direct effect on user's trust in m-government technology.
H5: Awareness of services has positive direct effect on user's perceived risk of m-government.

Mobile Experience

Undoubtedly, the users' knowledge and skills of using smart phone mobiles can lead to encourage them for m-government services acceptance and use. Previous studies have examined the effect of experience on technology in different forms. Amin et al. (2008) reported that prior experience is a predictor of users' perceptions. Al-Omari et al., (2010) criticized measuring the effect of trust in technology with a sample of respondents who are dissimilar in levels of computer knowledge and internet expertise of e-government adoption. Abu-Shanab (2012) measured the effect of computer and internet literacy, reported that people's high extent of illiteracy in computer skills were significant in affecting the e-government adoption in Jordan (Al-Omari et al., 2010). Similar findings were reported by Pons (2004) about e-government adoption in Arabic countries.

In general, the more experienced users of new technologies, the more expected to use a system, being feeling not risky (Ratten 2011). Venkatesh and Davis (2000) synthesized the variable "experience", when developing Technology Acceptance Model (TAM2), and reported that the users are creating their perception of usefulness of a system over time. Users' prior mobile phone experience affects their expectancy of mobile services (Alsheikh & Bojei, 2014).

The evidence was found by KPMG (2011), who exposed that users' experience of using mobile devices is a vital factor for the Middle Eastern. In Saudi Arabia, users perceived risk when using a new technology, especially in the preliminary stage of use (Baker et al. 2007). Differently, Abaza, and Saif (2015) found that users' experience of using the internet is non-significant to affect the users' intention to use m-government in Egypt. Inconsistent findings were reported about Middle East countries. These demonstrating the needs for further investigation through hypothesizing the following:

H6: Mobile experience has positive direct effect on user's perceived usefulness of m-government.
H7: Mobile experience has positive direct effect on user's perceived ease of m-government use.
H8: Mobile experience has positive direct effect on user's trust in m-government technology.
H9: Mobile experience has positive direct effect on user's perceived risk of m-government.

Perceived Usefulness

The earliest bases for the development of a TAM were perceived usefulness and perceived ease of use. In services systems, perceived usefulness is about the benefits and advantages that user can get from using a particular application or service (Almarashdeh, & Alsmadi, 2017). Numerous previous investigations demonstrated the influence of this factor upon user acceptance of technology-enabled services. Perceived usefulness has been identified as a significant factor affecting the acceptance of m-government and is the primary determining factor for the acceptance of technology in a range of circumstances highlighted by numerous reports including Althunibat et al. (2011), Aloudat et al. (2014), Hung et al. (2013), and Abaza, and Saif (2015). Almarashdeh, & Alsmadi, (2017) reported the positive effect of perceived usefulness on user's intention to use m-government is Saudi Arabia.

H10: Perceived usefulness has positive direct effect on user's intention to use m-government.

Perceived Ease of Use

Many investigations have recognised the perceived ease of use factor as having notable impact upon favourable first impression, enhanced possibilities for a wide range of m-government adoption, reduction of users support expenditure. Most importantly, perceived ease of use is vital to the acquisition of satisfied users. Aloudat et al. (2014) argued that additional information pertaining to the exact determinants that influence the users' perception of the ease of use of any particular technology is needed in order to steer technological design and development along the correct pathway. Numerous investigations, including Alhussain and Drew (2012), Aloudat et al., (2014), Althunibat et al. (2011), Almarashdeh, & Alsmadi, (2017), and Susanto and Goodwin (2013), have upheld this belief by highlighting a positive link between the perceived ease of use and acceptance of m-government. However, Abaza, and Saif (2015) found no impact of users' perceptions of ease of use on their intention to use m-government in Egypt. Differently, Almarashdeh, & Alsmadi, (2017) reported its positive effect in the same relation in Saudi Arabia. Further, users' perception of ease of use is increase when they are using a common and simple technology, therefore, easy to run. In Saudi Arabia, the users are feeling risky when using a new technology, especially in the early stage of adoption (Alkhaldi, 2017). User's perception of ease of m-government use is typically can increase their perception of such technology usefulness. This reflects that those users perceive m-government easy to use are the more expected to perceive such technology useful. This relation was hypothesized and evidenced by the original TAM, which was developed by Davis et al., (1989). Alotaibi, & Roussinov, (2017) found positive effect of user's perception of ease of m-government use on their perception of usefulness. However, Alotaibi, & Roussinov were collected responses from two Universities in Riyadh in Saudi Arabia, such sample possibly cannot be generalized about the Saudi community.

H11a: Perceived ease of use has positive direct effect on user's perception of usefulness of m-government.

H11b: Perceived ease of use has positive direct effect on user's intention to use m-government.
H11c: Perceived ease of use has negative direct effect on user's perception risk of m-government.

Perceived Cost of Services

The user adoption of the cost of services delivered by m-government can be guaranteed when compared to ordinary office services; the user advantages should be promoted and elucidated, especially when new services are offered to the market. Further, m-government cost must be in realistic prices to encourage users to adopt such new services (Almarashdeh, & Alsmadi, 2017). E-Services can be used by as a competitive edge to increase service rate and reduce costs (Swid & ElMelegy, 2012). Cost is believed to be a significant determinant affecting citizen behaviour; studies by Althunibat et al. (2011), and Susanto and Goodwin (2013) have demonstrated the unfavourable influence of service expense upon the individual's desire to make use of m-government services. The task of price comparison between various m-government service costs is influential factor in the user's selection and continuity in the use of the service. Although Assar (2015) emphasized that the lack of money (e.g, high-priced services of telecommunications) is one of the barriers are challenging m-government adoption in Saudi Arabia, which was ranked as the lowest barrier in the challenges list from the users view. Almarashdeh, & Alsmadi, (2017) reported that cost of services has negative effect on behavioural intention to use m-government services in Saudi Arabia. Further, in recent decade, the explanation of perceived risk relates to financial risks in users' behaviour towards online transactions (Im et al. 2008). In different words, users possibly perceive a technology as risk because its use could conveying financial risks (i.e, costs). The studies by Althunibat et al. (2011) and Susanto & Goodwin (2013) concluded that the government must pay greater consideration to the problem of m-government service costs, since this is what matters to the public.

H12a: Perceived cost of services has negative direct effect on user's intention to use m-government.
H12b: Perceived cost of services has positive direct effect on user's perception of risk of m-government.

Trust in Technology

Al-khamayseh et al. (2006) describe trust in technology as the user's confidence and judgement that a particular service is free from threats to privacy and security. Such public confidence is essential if the individual's selection of m-government services is to be encouraged. User attitude relating to trust has a major impact upon the decision to use. This indicates that the public perceive the potential of e-government to improve government function, but that their intention to adopt m-government services is hindered by anxiety that passing personal data to the government via the internet may lead to data alteration and loss of privacy. Abaza, and Saif (2015) reported that trust in mobile internet, and data quality (i.e trust in technology) were failed to affect the users' intention to use m-government. A significant positive correlation between trust and the acceptance of m-government services, under a range of circumstances, has also been noted by Baabdullah et al., (2014). Althunibat et al., (2011) asserts the effect of trust in technology on user's intention to use of m-government services in Malaysia. The same findings were reported by Almarashdeh, & Alsmadi, (2017) about Saudi Arabia. In the same way, Assar (2015) stated that security, privacy, and distrust in m-government services is a major challenge that facing users in Saudi Arabia.

Further, trust in technology is significant factor in decreasing perceived risks of using technologies, especially new technologies and for transactions including ambiguity status. As the m-government adoption is still in the early stage in some countries (e.g, Saudi Arabia), the users are not assured about the technical ability of their service provider and about the security and privacy of the offered services. This has shaped unwillingness among them to accept and use of m-government services for feeling risky (Assar 2015; Almarashdeh, & Alsmadi, 2017).

As a result, there are odd results reported by previous studies. Therefore, there is a needs deemed necessary to investigate such factors.

H13a: Trust in technology has negative direct effect on user's perception risk of m-government.
H13b: Trust in technology has positive direct effect on user's intention to use m-government.

Perceived Risk

Susanto and Goodwin (2010) described perceived risk in the context of m-government, as the extent to which the individual considers that the use of m-government services may lead to problems for him/her. This includes worries regarding the risks involved in the technology itself, user security and privacy, and possible financial threats. In particular, Althunibat et al. (2011), Aloudat et al. (2014), Susanto and Goodwin (2013), and Baabdullah et al. (2014) discovered a highly unfavourable influence of perceived security risk upon the individual's intention to adopt e-government and m-government services. In Saudi Arabia, feeling risky for being concerned with regards of security and privacy issues will create users' willingness to reject, and thus, not adopt m-government services is one of the most crucial barriers challenging users (Assar, 2015).

H14: Perceived risk has negative direct effect on user's intention to use m-government.

Depends on the above literature definition of constructs along with its importance and possible relevance with each other, the hypotheses were formulated, thus, the m-government research model of this study was developed, as illustrates in Figure 1.

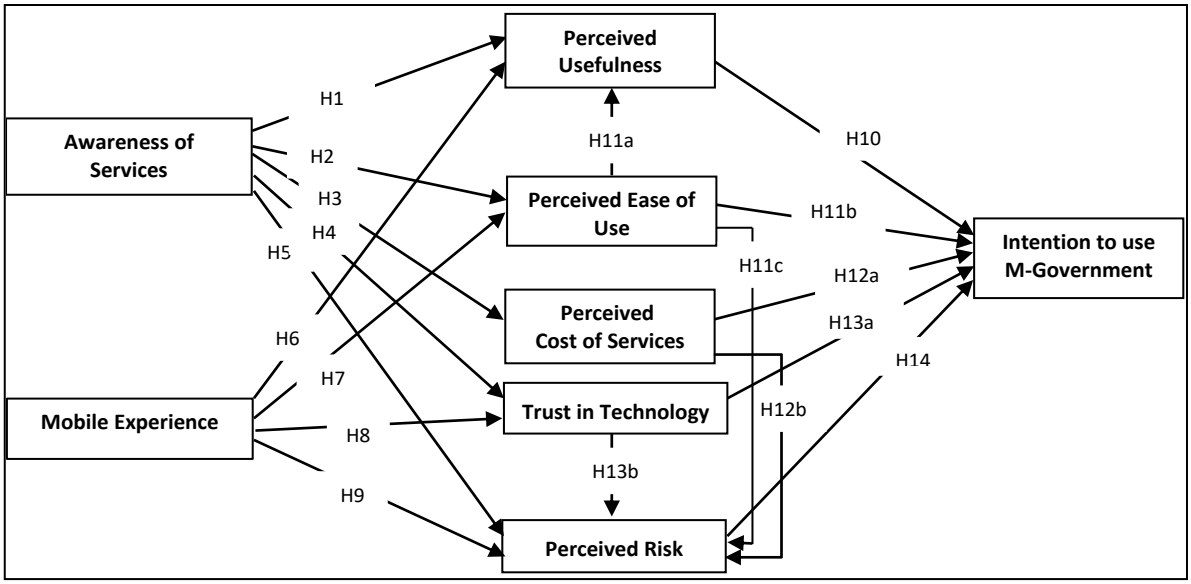

Figure 1: the Research Conceptual Model

METHODOLOGY

Quantitative approach by survey method technique was used, as it is suitable technique when the variables to be surveyed have already been explored in previous studies. Furthermore, a survey questionnaire empowers respondents with express their values, beliefs, and tendencies. The questionnaire was designed for the research comprises close-ended questions to facilitate easy coding and analysis. The researcher has adapted the questionnaire questions from several studies, these questions were modified to be fit with this study. Mobile phone experience items were adapted from a study of Al-Ghaith, et al., (2010); awareness of m-banking services from Al-Somali, et al., (2009); all other factors were adapted from Althunibat et al. (2011).

Data collection was driven using a cross-sectional survey, because users' perceptions not going to change over a short time. Online-based questionnaire was sent randomly to 1900 person in various regions in Saudi Arabia. Online questionnaire deemed necessary in order to reach respondents from far regions in such a wide country. The

reason for distributing the huge number the questionnaires was to obtain a sufficient sample. As a result, 426 usable responses were received, where the overall response rate was 22.42 %.

DATA ANALYSIS

Sample's Demographic Profile

Males were dominant (72.8%) in the sample as shown in Table 1. Based on Saudi beliefs, males are responsible for achieving governmental processes, and they also make up the majority of the workforce in this country (Alharbi, et al., 2017). Saudi Arabian were dominant (75.6%) in the sample.

Table 1: Sample's Demographic Profile

Demographic Factor	Category	Frequency	Percent
Age	Less than 20 years	31	7.3
	20-29 years	135	31.7
	30-39 years	141	33.1
	40-49 years	89	20.9
	50 years or more	30	7.0
Gender	Male	310	72.8
	Female	116	27.2
Education level	Secondary School or less	66	15.5
	Diploma or Bachelor degree	259	60.8
	Masters and PhD degree	101	23.7
Monthly income	Less than 1350 USD	155	36.4
	1330 USD – 2660 USD	88	20.7
	2661- 4000 USD	105	24.6
	4000 USD or more	78	18.3
Nationality	Saudi Arabian	322	75.6
	Non-Saudi Arabian	104	24.4

Reliability Analysis

Cronbach's Alpha values of trust of technology is 0.751, thus it's within the acceptable level of reliability. Perceived of risk 0.800, mobile experience 0.857, awareness of services 0.851, perceived ease of use 0.852, cost of services 0.887, are within preferable level of reliability. Perceived usefulness .906 and behavioral intention to use 0.921 are within excellent reliability.

Overall, Cronbach's Alpha values of each variable is more than 0.7, thus, all the variables are reliable.

Exploratory Factor Analysis (EFA)

The Varimax rotation method was used to test constructs validity. This method is appropriate to detect low loading item(s) and/or double loading. Additionally, the measure of sampling adequacy, namely Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity (BTS) were performed to guarantee the appropriateness of EFA analysis. The KMO is 0.88, reflects acceptable value, and the value of BTS was significant (>0.05). Therefore, EFA is considerable for this study.

The results show that in communalities extraction there were two items with low loading (i.e trust in technology 1 (0.494), and trust in technology 2 (0.385)), and thus removed from analysis. The rotated component matrix shows only double loading item was detected (i.e trust in technology 3), and removed, thus the whole variable was not submitted for further analysis. The other variables are valid, and thus submitted for hypotheses testing.

Hypotheses Testing

The regression test was performed to measure the effect of each an independent variable on dependent variable as assumed in the hypotheses. These presented the following sections.

Awareness of Services

Table 2: Results of measuring the effect of awareness of services

	Hypothesis	Direction hypothesized	Unstandardized B	Unstandardized Std.	R	R Square	Sig.	Result
H1	AW→ PU	Positive	0.171	0.037	0.218	0.048	0.000	Supported
H2	AW→ PEOU	Positive	0.155	0.029	0.251	0.063	0.000	Supported
H3	AW→ PCOS	Negative	0.102	0.040	0.123	0.015	0.011	Rejected
H5	AW→ PR	Negative	0.051	0.036	0.070	0.005	0.149	Rejected

AW= Awareness of services, PU= perceived usefulness, PEOU= perceived ease of use, PCOS= perceived cost of services, PR= perceived risk

Depends on the regression testing in Table 2, the awareness of services was significant factor (significant at $\alpha<0.05$) to increase ($\beta=0.171$, R Square=0.048) users' perception of m-government usefulness. This reflects that the more aware users of m-government services, the more perceive of it more useful. Therefore, the H1 was supported. In the same direction, H2 was also supported. The H2 reflects that the more aware users of m-government services, the more perceive it as easy to use system, as the ease of use effect was positive ($\beta=0.155, 0.063$).

In reverse to what expected, awareness of services was significant factor to increase ($\beta=0.102$) users' perception of cost of m-government services. This reflects that the more aware users of m-government services, the

more perceive it costly services. Therefore, the H3 was not supported. Also, the H5 was rejected, as the awareness of services was not significant factor to affect users' perception of risk in m-government.

Table 3: Results of measuring the effect of mobile experience

	Hypothesis	Direction hypothesized	Unstandardized β	Unstandardized Std. Error	R	R Square	Sig.	Result
H6	ME→ PU	Positive	0.357	0.038	0.411	0.169	0.000	Supported
H7	ME→ PEOU	Positive	0.268	0.031	0.391	0.153	0.000	Supported
H9	ME→ PR	Negative	0.012	0.040	0.014	0.000	0.768	Rejected

ME= Mobile experience, PU= perceived usefulness, PEOU= perceived ease of use, PCOS= perceived cost of services, PR= perceived risk

As shown in Table 3, as expected H6 and H7 were supported, as mobile experience was significant factor to increase (β=0.357, 0.268), (R Sauare=0.169, 0.153) consumer's perceived usefulness as well as ease of m-government use, respectively. However, mobile experience was not significant factor to affect users' perception of risk in m-government. Therefore, H9 was not supported.

Table 4: Results of measuring the effect of each of perceived usefulness, perceived ease of use, perceived cost of services, and perceived risk

	Hypothesis	Direction hypothesized	Unstandardized β	Unstandardized Std.	R	R Square	Sig.	Result
H10	PU→ IU	Positive	0.561	0.034	0.629	0.395	0.000	Supported
H11a	PEOU→ PU	Positive	0.864	0.045	0.681	0.463	0.000	Supported
H11b	PEOU→ IU	Positive	0.663	0.045	0.585	0.343	0.000	Supported
H11c	PEOU→ PR	Negative	-0.044	0.058	0.037	0.001	0.450	Rejected
H12a	PCOS→ IU	Negative	-0.190	0.040	0.226	0.051	0.000	Supported
H12b	PCOS→ PR	Positive	0.326	0.040	0.368	0.163	0.000	Supported
H14	PR→ IU	Negative	-0.141	0.046	0.148	0.022	0.002	Supported

PU= perceived usefulness, PEOU= perceived ease of use, PCOS= perceived cost of services, PR= perceived risk, IU= intention to use

As shown in Table 4, perceived usefulness was significant factor to strongly increase (β=0.561), user's intention to use m-government. Therefore, the H10 was supported. Perceived ease of use was also was significant factor to strongly increase perceived usefulness (β=0.864), user's intention to use m-government (β=0.663), but failed to affect perceived risk. The effect from perceived usefulness (39.5 %). The effect of perceived ease of use (46.3 %), (34.3 %), was indicating high variance in perceived usefulness as well as intention to use m-government can be explained by these factors respectively. Therefore, the H11a and H11b were supported, but not H11c. Also, the H12a, H12b, and H14 were supported. As the perceived cost of services, and perceived risk were significant factor to inhibit user's intention to use m-government, since the effect is negative (β= -0.190), (β= -0.141) respectively. The perceived cost of services increases the perceived risk (β= 0.326). This reflects that the more users

perceive m-government costly and risky, the less intention to use m-government system. Also the more users perceive m-government costly, the more risky to use such system.
Figure 2 illustrates the developed conceptual research model, which was tested and proved by testing the hypotheses.

***:p< 0.01; **:p< 0.05; *:p< 0.10; n.s.: not significant.

Supported, ——→ Not supported - - - - - - - - →

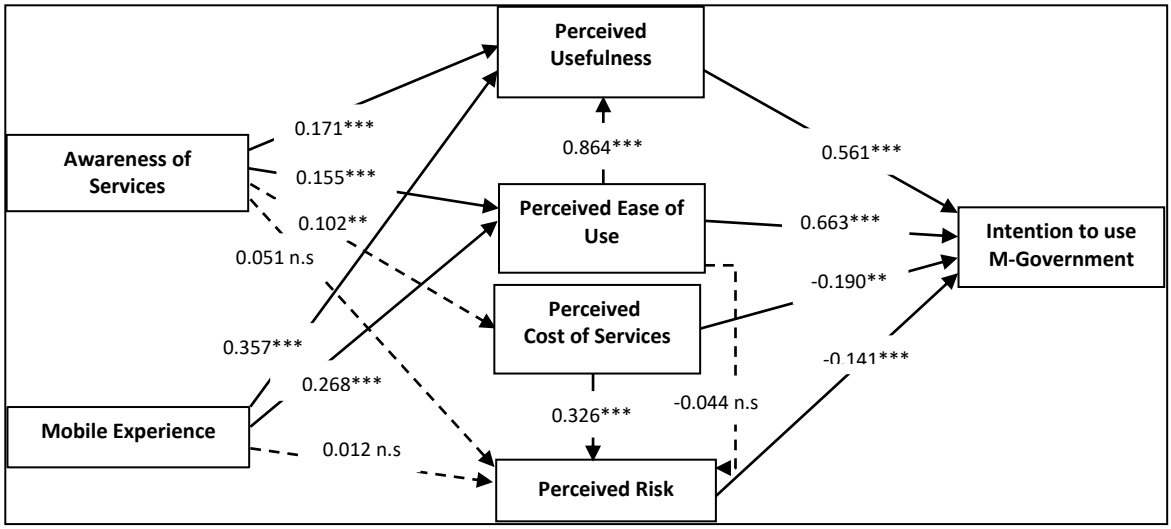

Figure 2. Developed conceptual research model

FINDINGS AND DISCUSSIONS

The significance positive effect of the user's awareness of services on perceived usefulness, and perceived ease of use was proved by this study. This is consistence with the results reported by Al-Somali et al., (2009), about internet banking. Whilst, reverse effect was found on users' perceived cost of services of m-government, which is unexpected; and no effect on perceived risk. This might be explained by unspecified measurement items of perceived cost of services. Another explanation might be the existence cost of running such services via Internet, with no costs of transaction fee or government charge when using m-government services compared with ATMs. Althunibat et al. (2011), and Susanto and Goodwin (2013) reported the opposite with regards of the positive effect of perceived cost of services in the current study. There are previous studies inconsistent with the non-effect of awareness of services on perceived risk, such as Alsheikh and Bojei (2014), were confirmed that high awareness of m-banking services (sufficient and concrete information), lead to lowest customers perceived risk.

Concerning the users' mobile phone experience, it could positively affect the users' perception of usefulness, and perception ease of m-government use, but failed to affect their perception of risk of m-government services. This result similar to Alsheikh and Bojei, (2014), who reported that mobile phone experience, affects their expectancy of m-banking services. Dissimilar results reported by Horst et al., (2007), who found that respondents express a lower level of risk perception when personal experiences with e-government are high.

As expected, users' perceived usefulness, and perceived ease of use were strongly increase their intention to use m-government. This is consistence with what was reported by Aloudat et al., (2014); and Hung et al., (2013) about the positive effect of perceived usefulness. But, dissimilar to results found by Abaza, and Saif (2015), that no effect of perceived ease of use. It's worth mentioning that, the perceived usefulness, and the perceived ease of use

were the most salient determinants factors in the research model of this study. Perceived cost of services, and perceived risk decrease their intention to use m-government. These results are consistent with studies by Althunibat et al. (2011), and Susanto and Goodwin (2013) about perceived of cost; and consistence with Althunibat et al. (2011), Aloudat et al. (2014), Susanto and Goodwin (2013), and Baabdullah et al. (2014) with regards of perception of risk.

THEORETICAL AND PRACTICAL IMPLICATIONS

Theoretically, this study enriches the literature of m-government field of study, through surveying the previous studies, and concluded the importance of investigating the user's perspectives in m-government. This study developed, and validated a new theoretical m-government model, specifically in the context of Saudi Arabia. This study reveals some insights of new variables that could predict the users' intention to use in m-government; this was though hypothesizing two factors (user's awareness of m-government services and mobile phone experience) as antecedents of user's perceptions. This study discovered the significant role of users' awareness of m-government services as well as, their experience in using mobile phone as predictors indirectly on user's intention to use m-government. However, these factors were failed to play role on users' perception of risk of m-government, which emerging the need for further investigation. Users' perception of risk was predictor on the intention to use m-government. Ultimately, this study comes out with a new theoretical model that can be extended or employed in a different region, setting, type of users, and technology.

Practically, this study warning the government in Saudi Arabia, that merely offering m-government service does not assure success of m-government implementation. Thus, they are advised to increase the peoples' awareness about m-government services. Government should hold onto informing and educating their people about the existence of m-government services, benefits of use, and presenting how easy to use mobile phones for government services, but not about privacy and security. This unexpected result that the more awareness users, the more perception of m-government cost, should motivate the government to aware users about the different kinds of costs in this context. The government should inform people that accomplishing government transactions via m-government is for free, and the only costs are associated with the operational expenses (i.e connects with the internet). The government can also aware people via e-banking, ATM machine, and Short Message Service (SMS), this in order market their m-government services.

M-government channel has the necessity to introduce something imaginative to people in comparison with existing channels government services to keep survival. M-government services should be easy to use and useful to keep survived and lead people intend to use it in comparison with other electronic medium services (e.g. e-government). The Saudi government need to guarantee the ease of using m-government as this can encourage users to earn greater benefits from using such technology, but not associated with their feeling of risk, nor their trust perception. This factor can enhance the real users' use of m-government and draw the user's intention to use such technology. The Saudi government is advised to pay a consideration to the m-government services' costs and user's feeling of risk, since these are influential matters to the public. The Saudi government is advised to follow a secure mechanism. That is, a system equipped with attributes such as, fingerprints, facial characteristics, and voice patterns.

CONCLUSION AND FUTURE WORK

The common use of smart phones in the world in general, and in Saudi Arabia in particular. The researches on factors affecting user behaviour to adopt and use services via mobiles are increasing. This study contribute by adding to the literature review in the field of m-government, hypothesized potential effect of several factors, and discovered what influences peoples' intention to use m-government. The role of uses' awareness of m-government services as well as their experience in using mobiles are reveals, in more exclusive and influential than other previous acceptance models, for explaining users' intention to use such system. This study highlights the applicability of synthesizing these new factors in further studies, and holds validity in determining technology acceptance in developing countries, especially in Saudi Arabia. This paper deducts a new theoretical conceptual model.

Several limitations should be taken into consideration in future research. Since awareness of services factor was failed to affect perceived cost of services, and perceived risk as hypothesized, researchers are recommended to investigate in-depth, as why cannot have impact; and examine other relevant factors, such as credibility, and/or trust. Further, the population sample consists of a large number of males, but a small number of females, which might be unbalanced and resulting in accurate findings especially in Saudi Arabia, where gender is a powerful covariate. As this study examines the use of m-government services in general, future researchers are advised to focus on a specific type of m-government (e.g SMS government services) probably have differences in usage and adoption.

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