

INTEGRATING THEORIES OF INTERNATIONAL RELATIONS AND NATIONAL COMPETITIVENESS FOR SUPPORTING OBOR INITIATIVE IMPLEMENTATION

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Abstract

A structural realism position is justified in this article. In particular, a version advocating “Concerted Unilateralism” is borrowed in realizing the approaches based on a structural realism. The structural realism underpins the BRIs in justifying for national competitiveness, and addressing issues, such as relating to PEST – the macro environment that influences competitiveness of industries. To execute in according to the structural realism paradigm, four-fold research objectives were targeted. First, Identify, through literature review, a suitable international relations theory or paradigm that can provide an intellectual guideline for the theoretical conceptions and empirical efforts. Second, provide some robust empirical evidences to support the direction of OBOR investments and draw the corresponding propositions as guidance. Third, provide a snapshot of current-state-of-perceptions of the OBOR subject experts in ASEAN and South Asia studies from across China, in the partial aspects of PEST (the macro-environment). Fourth, integrate the 1,2,3 objectives and suggest a MODEL for OBOR investments, policy discussions and strategy formulations. A mixture of quantitative methods are used: simple multiple-regression analysis, mathematical multi-decision ranking and optimization methods (TOPSIS, AHP), and IPA-statistical analysis.

Keywords: International relations, National competitiveness, One Belt One Road, OBOR, AHP, TOPSIS, IPA.

Introduction

The Belt and Road Summit 2019 in Hong Kong brought a diversity of participants, of them approximately 5000 government officials and business leaders, approximately 520 one-to-one business matching meetings, 80+ prominent international speakers, 100 exhibitors, 100 Mainland China and overseas delegation, and 230+ investment projects (Belt and Road Summit Hong Kong). The testimonials from both the public and private sectors attendants indicate the role of the induced benefits OBOR (One Belt One Road) initiatives can bring to the individuals, businesses, and nations. The interests are, to an observable extent, linked to the nature of environment stimulated through OBOR initiatives, such as at the macro-economics, industry- and business-levels.

A testimonial from the summit infers the business opportunities arising from the OBOR initiatives:

“Last year we signed a MoU with a new start-up in Hong Kong, Over the year, our company has already developed a business of about a few million US Dollars, so I think the Belt and Road Summit is a very fruitful event. We always recommend our

partners in Thailand to join the Summit” – A senior vice president, Loxley Public Company (Thailand).”

While there are positive sides of the OBOR initiatives, equally, there are also fears and challenges the policy makers need to address. Fears must be overcome, areas of neglect and views that block the active participations of the participating countries must not be ignored and should be creatively, theoretically and holistically challenged and resolved. For instance, in a recent OBOR Summit in Beijing, an interview with the Prime Minister Dr. Mahathir Mohammad by KiniTV (Malaysia) notes of a change of views and perceptions:

“Now that I understand better the intention behind this idea of the Belt and Road Initiative. In the first place is the problems we have with the ECRL and the Bandar Malaysia, is not about Malaysia and China; it is about money; if it is too expensive for us, we have to reduce the cost, even if the project is with any other countries, we would have to adopt the same strategy to reduce the borrowing from other countries. So, it is not linked to the BRI. China and Chinese companies have been investing a lot in Malaysia. I met them just now and I find that they have put in a lot of money into Malaysia, and they seem to be quite happy with it, and we welcome their investments in Malaysia, as much as we welcome all foreign direct investments.” (KiniTV, 2019).

Research of Objective

Clearly there are challenges ahead of OBOR implementation, whether in terms of views, theories that can guide the policy making, risk perceptions, or competitiveness orientation in approaches. As a contribution towards making clear the OBOR policy discussions and implementation, fourfold research objectives are raised, as follows:

1. Identify, through literature review, a suitable international relations theory or paradigm that can provide an intellectual guideline for the theoretical conceptions and empirical efforts.
2. Provide some robust empirical evidences to support the direction of OBOR investments and draw the corresponding propositions as guidance.
3. Provide a snapshot of current-state-of-perceptions of the OBOR subject experts in ASEAN and South Asia studies from across China, in the partial aspects of PEST (the macro-environment).
4. Integrate the 1,2,3 objectives and suggest a MODEL for OBOR investments, policy discussions and strategy formulations.

Literature Review

The literature review is laid out according to the purpose as stated in the research objectives. First, a structural realist position of International Relations that adapts “Concerted Unilateralism” concept, is discussed, which provides a theoretical basis for guiding the structural and propositional conclusion of this research, and fulfils the first research objective. Second, the literature provides a contextual discussion that explains the role of national competitiveness, as it is inferred to assume an important role for the policy makers to consider along “Concerted

Unilateralism” concept, which serves to address the second research objective. To support the third research objective, the role of PEST (Politics, Economics, Society, and Technology) framework is discussed, which can serve as a macro-economics environment the policy-makers should sensitize and make concerted efforts upon.

Structural Realist Position of International Relations Guided by Concerted Unilateralism
The Belt and Road Initiative (BRI), or One Belt One Road (OBOR) Initiative, can be described as “China’s grand connectivity project” (Chung, 2017), propelled partly by China’s impressive economics performances globally (Zhai, 2017). Due to the global scale, OBOR initiative can be seen to influence towards transforming regional political and economic landscapes (Yang, Jiang, and Ng, 2018). It is the latter issues that warrant the concerns and critiques of some nations. If the BRI or OBOR is argued from the structural realist points of view, one can rationalize that China’s objective is to use OBOR as means to an end, and ultimately, for its survival and power balancing in the world (cf. Mearsheimer, 2013). In view of this logic, many researchers argue that the OBOR initiative is a means for China to act within the region (Wang, 2016); thus, it renders the defensive reactions of some nations (Fint and Zhu, 2019). To defend against the similar variants of defensive arguments, President Xi was quoted saying at the gathering of 37 world leaders:

“The Belt and Road is not an exclusive club”, arguing further that China has rejected accusations that Belt and Road is a “debt trap” and a geopolitical tool for Beijing’s ambitions of becoming a global superpower” (Bangkok Post, 2019).

Clearly, different nature of philosophical arguments, such as structural realism (Mearsheimer, 2013), or critical theory (Roach, 2013), or constructivism (Fierke, 2013), could lead to a large variation of interpretations into the intention and objectives of OBOR, both for China and the participating countries. For instance, Flint and Zhu (2019) adopt a political economy approach to geopolitics, highlighting the “single logic” of competition in the capitalist world-economy, that “firms and states are connected as the former seeks to maximize profits while states (i) seek to capture that economic activity within their borders, (ii) make global connections that maximize the benefits of global economic flows for their domestic economy, and (iii) intertwine economic agendas with geopolitical goals” (pp. 95-96). To some extent, this research underpins on a realist approach, which is presupposed in a philosophical stance that “power is the currency of international politics” (Mearsheimer, 2013, p. 51); in particular, it deals with a possible power shifting due to some planned structural changes to the nation’s competitiveness systems, as configured in Porter’s (1990) Diamond model and studied in Zhao, Tan and Jiang (2019).

To tackle some of the observable or yet-to-discover challenges and criticisms, Vines (2016) argues for a “concerted unilateralism” approach to Chinese leadership that is more cooperative in manner, such as by means of creating an international forum, in which country representations and participants can exchange and share information, and articulate the concerns, so that shared and collective actions can be agreed upon. At best, once agreement has been reached within the fora, each individual country will be able to act of his or her own free will, rather than being coerced. The cooperative spirit is clearly illustrated in the five cooperation priorities of the OBOR Initiative: (1) Policy coordination – co-development of large scale projects, (2) Facilitative connectivity – infrastructure projects and removal of institutional and logistical bottlenecks, (3) trade facilitation, (4) financial cooperation – to offer good quality financial services, and (5) people-to-people bonds – cultural and academic exchanges (Liu and Dunford, 2016; Flint and Zhu, 2019, p. 97). Further on, Huang (2016) stresses on the win-win cooperative position of OBOR initiative, and through

inter-country connectivity, OBOR can be an effective structural stimulation to sustain global economic growth.

National Competitiveness

As argued in Hanafi, Wibisono, Mankusubroto, Siallagan and Badriyah (2017), “In a world of increasing global competition, the nation has become more important as the basis of competition, which is influenced by globalization in responding to global market competition of its superior products and services to fulfil world needs” (p. 335). A nation’s competition is a key driving force in the development of a nation’s market and economic systems (LaVan and Murphy, 2007), which leads to the study of a nation’s competitiveness very significant (GCI, 2018). Global Competitiveness Index, GCI 2018, was determined to be a valid indicator for competitiveness study, which assumes a role to predict GNI per capita, as shown in Figure 1, and the net growth rate of nation, in Figure 2. The Global Competitiveness Report (CG) is an annual publication by the World Economic Forum (WEF), which “analyzes, intercepts, and ranks national business and industry growth rates” (LaVan and Murphy, 2007, p. 15), for 140 countries, consisted of seven regions, namely East Asia and the Pacific, Eurasia, Europe and North America, Latin America and the Caribbean, Middle East and North Africa, South Asia, and Sub-Saharan Africa, shown in Table 1.

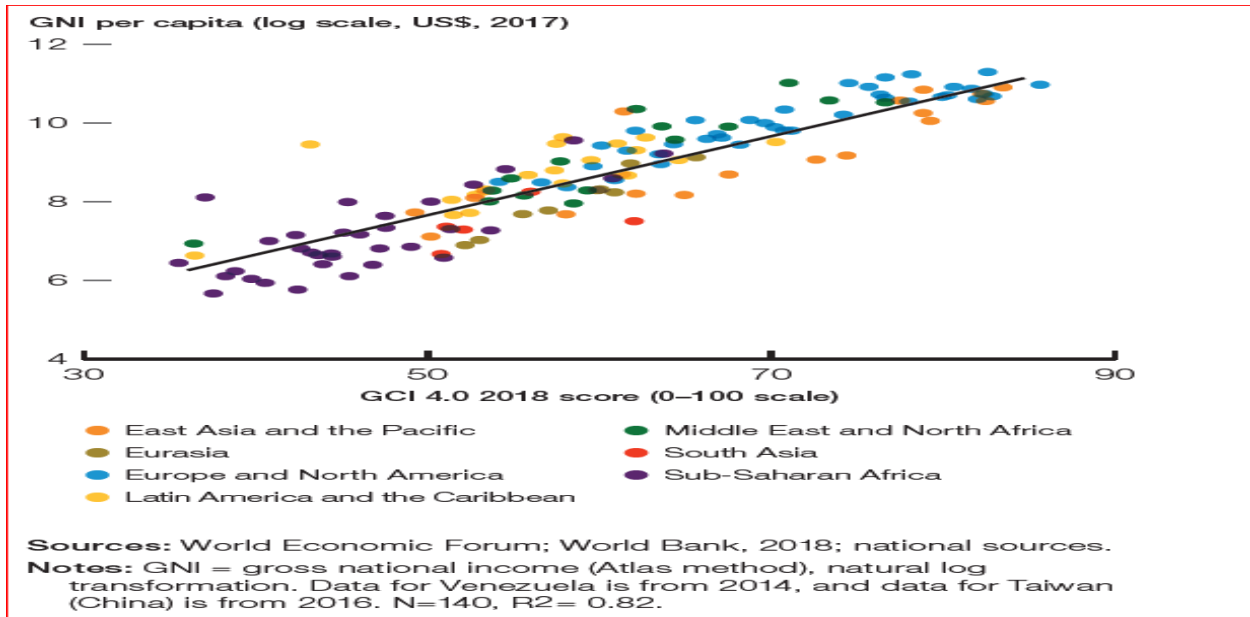


Figure 1 Validity of GCI 2018, shown by GNI Per Capital (Source: GCI, 2018, p. 7)

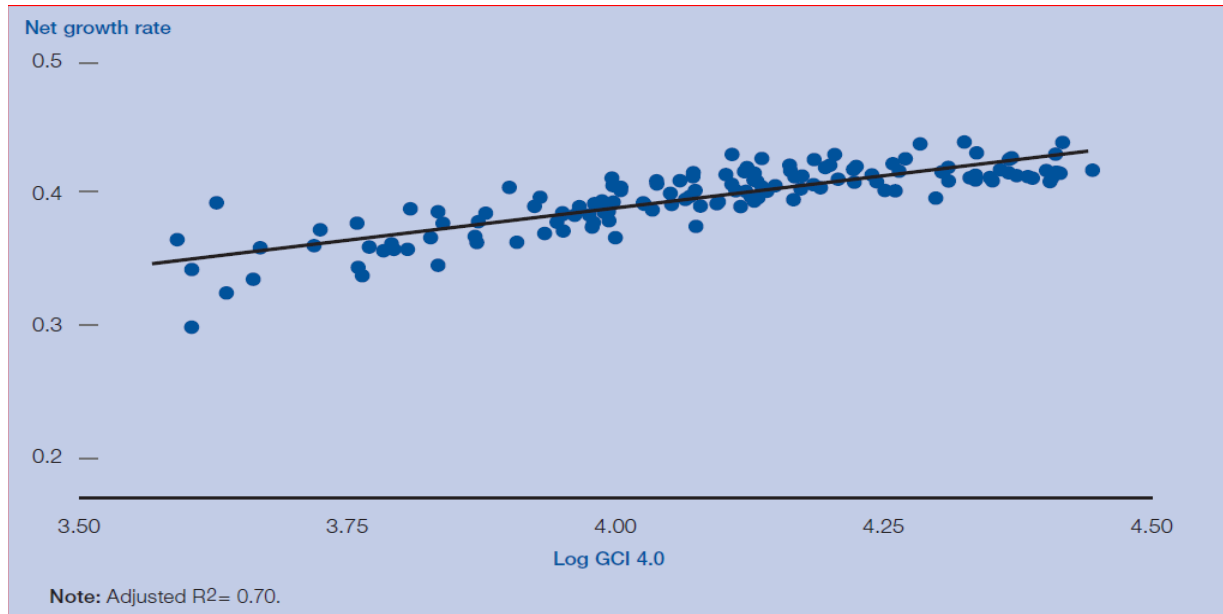


Figure 2 Validity of GCI 2018 Shown by Net Growth Rate of Nation (Source: GCI, 2018, p. 45)

Table 1 Regional Performance of the Global Competitiveness Index 2018, by Pillar (GCI, 2018, p. 25)

Region	Enabling environment				Human capital		Markets				Innovation ecosystem	
	Institutions ¹	Infrastructure	ICT adoption	Macroeconomic stability	Health	Skills	Product market	Labour market	Financial system	Market size	Business dynamism	Innovation capability
East Asia and the Pacific	61.6	74.3	67.3	88.9	84.3	66.9	62.2	65.9	72.8	67.2	65.7	52.9
Eurasia	53.0	66.3	57.1	71.7	73.4	65.6	57.1	61.6	50.8	49.8	60.1	34.8
Europe and North America	64.5	78.7	68.0	91.8	90.7	74.2	62.0	66.2	69.5	59.6	68.3	58.1
Latin America and the Caribbean	47.8	61.1	46.4	74.0	82.7	57.5	53.9	55.3	59.5	52.5	52.4	33.8
Middle East and North Africa	54.3	69.0	54.1	79.6	80.0	61.4	54.7	52.3	61.8	60.3	56.7	39.9
South Asia	50.1	59.6	33.0	74.1	68.4	49.7	47.3	51.7	59.0	66.9	56.5	36.4
Sub-Saharan Africa	47.5	46.3	29.6	66.9	48.0	43.4	50.4	53.8	50.4	38.8	51.1	28.4

Source: World Economic Forum analysis.

Note: See the At a Glance section on page xi for regional classification. Darker shades indicate better performance.

Not only that a nation’s competitiveness (such as GCI 2018) can be used to study the productivity of a nation (GCI, 2018), it can be reckoned to influence as a nation’s business and competition environment, which “affects territories, operating systems that create the conditions of economic and social development and attract new entrepreneurship” (D’Aleo and Sergi, 2017, p. 1613).

PEST Framework

Putting ideologies and theoretical philosophies of international relations aside, it is clear that what matters on the economies will also matter on non-economic issues such as politics, societies and technologies, which is the rationale behind PEST framework. At a global scale, OBOR initiative would assume to create a new rhetoric of concerns and international-relations languages that could lead to new forms of territorial arrangements (Glassman, 2011) and strategic shifts. In view of the PEST-induced challenges, this research attempts only to voice and point out some of the important concerns of OBOR subject experts and delineates a structural pattern of nation's competitiveness drivers from the available data at global level, so as to bring to the attention of the researchers and relating stakeholders to some practical concerns and structural issues that could impact on OBOR initiative implementation.

Research Methodology

This research adapts three methods – namely, SPSS (hierarchical multiple regression analysis), TOPSIS (with AHP in the weightage evaluations) and IPA (Importance-Performance Analysis) – to capture the current states of development by OBOR-participating countries towards strengthening the national competitiveness in industries, and also the patterns of perceptual differences of OBOR subject experts associated with international relations researches in China.

EXPERT RESPONDENTS

Questionnaires are used to collect the perceptions on the PEST and OBOR influences. The respondents consist of 22 scholars aged 35-48, from across China., who specialize in international relations with ASEAN (12 respondents) and South Asia countries (10 respondents). The experts are from Yunnan Academy of Social Sciences, Guangxi Academy of Social Sciences, Tsinghua University, Peking University, Sichuan University and Yunnan University where international relations with ASEAN and South Asia is actively researched. The informants are drawn from only the subject experts and ignore other domains, which is necessarily needed for optimization method with consistent focus.

TOPSIS

TOPSIS is a multicriteria decision-making technique. TOPSIS stands for Technique for Order Preference by Similarity to Ideal Solution, which was first introduced by Hwang and Yoon (1981), but soon became a classic multiple attribute decision making (MADM) method with more than 4,500 citations (Yoon and Kim, 2017). TOPSIS has been used in various strategic and operations management studies. For instance, Subramaniya, Guru Dev and SenthilKumar (2017) uses TOPSIS to identify the critical success factors (CSFs) which could contribute to increase the agility level of the Textile industry in India. Ajmera (2017) uses TOPSIS to rank the strategies for Indian medical tourism sector through the integration of SWOT analysis and TOPSIS method. That is, based on SWOT analysis, organizations can then use TOPSIS to find the best alternative among the available strategic alternatives that is important for firm to sustain in today's competitive marketplace (Ajmera, 2017). By treating the numbers of the respondents as describer of compatibility to fuzzy concept (Zadeh, 2009), TOPSIS can be turned into a fuzzy TOPSIS version (Shakerian, Dehnavi, and Ghanad, 2016).

TOPSIS assumes that if we have m alternatives (options) and n attributes / criteria and we have the score of each option with respect to each criterion:

Let x_{ij} score of option i with respect to criterion j ; a matrix $A = (x_{ij})$ of $m \times n$ matrix; Let J be the set of benefit attributes or criteria, and let J' be the set of negative attributes or criteria.

Step 1: Construct normalized decision matrix – this step transforms various attribute dimensions into non-dimensional attributes, which allows comparisons across criteria, and normalize scores or data as follows:

$$r_{ij} = \frac{x_{ij}}{\sum x_{ij}^2} \text{ for } i = 1, \dots, m; j = 1, \dots, n.$$

Step 2: Construct the weighted normalized decision matrix, by assuming we have a set of weights for each criteria w_j for $j = 1, \dots, n$. Then, we multiple each column of the normalized decision matrix by its associated weight, and thus the element become:

$$v_{ij} = w_j r_{ij}$$

Step 3: Determine the ideal and negative ideal solutions:

Positive Ideal solution:

$$A^+ = \{v_1^+, \dots, v_n^+\}$$

Where:

$$v_j^+ = \{\max(v_{ij}) \text{ if } j \in J; \min(v_{ij}) \text{ if } j \in J'\}$$

Negative Ideal solution:

$$A^- = \{v_1^-, \dots, v_n^-\}$$

Where:

$$v_j^- = \{\min(v_{ij}) \text{ if } j \in J; \max(v_{ij}) \text{ if } j \in J'\}$$

Step 4: Calculate the separation measures for each alternative
The separation from the positive ideal alternative is:

$$S_i^+ = [\sum (v_j^+ - v_{ij})^2]^{1/2}; i = 1, \dots, m$$

Similarly, the separation from the negative ideal alternative is:

$$S_i^- = [\sum (v_j^- - v_{ij})^2]^{1/2}; i = 1, \dots, m$$

Step 5: Calculate the relative closeness of alternative to the ideal solution P_i^* , which is a value function (Yoon and Kim, 2017)

$$C_i^* = \frac{S_i^-}{S_i^+}, 0 < C_i^* < 1$$

Choose the alternative in which C_i^* is closer to 1, or perform the ranking from among the alternatives, so that prioritization of the strategies can be identified, or benchmarking of the best performed from the alternatives can be revealed.

It is noted in Yoon and Kim (2017) that the value function can be rewritten by $S_i^- = VS_i^+$, which is a straight line that has a slope of V and V-axis intercept of zero where the value increased, the line becomes steeper. Then, as shown in Yoon and Kim (2017), the most preferred alternative is one that meets the indifference curve with the steepest slope. Figure 2 shows A_1 is the most preferred alternative and A_3 is the least preferred.

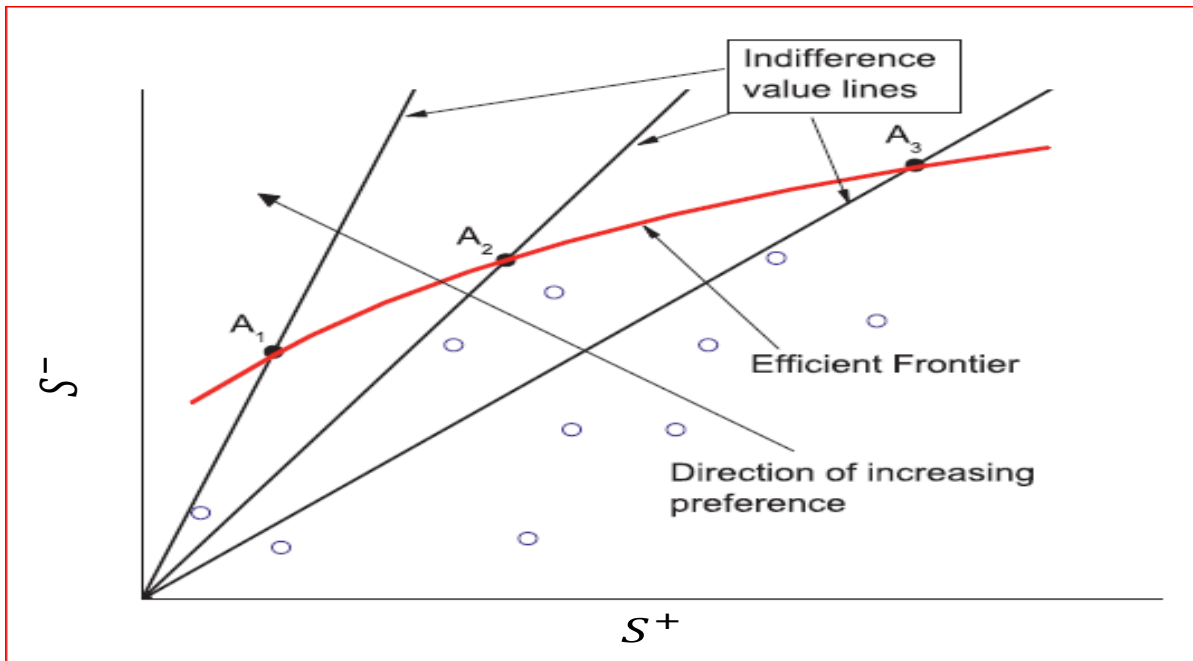


Figure 3 Preference Order by Original TOPSIS

Correspondingly, A_j is preferred to A_k if the slope, V of A_j is more than V of A_k :

$$\frac{S_j^-}{S_j^+} > \frac{S_k^-}{S_k^+}$$

Which is mathematically equivalent to the following equations,

$$\frac{S_j^-}{S_j^+ + S_j^-} > \frac{S_k^-}{S_k^+ + S_k^-}$$

That is, the relative closeness of alternative A_i to the ideal solution is defined as:

$C_i^+ = \frac{s_i^-}{s_i^- + s_i^+}; i = 1, \dots, n$; where $0 \leq C_i^+ \leq 1$, and $C_i^+ = 0$ when $A_i = A^-$, and $C_i^+ = 1$ when $A_i = A^+$. TOPSIS picks an alternative that has the maximum C^+ , or rank them accordingly.

Importance-Performance Analysis

Since the original seminal conception owed to Martilla and James (1977), IPA (Importance-Performance Analysis) technique has gained widespread usages and popularity in the field of strategic management discipline as well as hospitality and tourism industry (Azzopardi and Nash, 2013; Matzler, Sauerwein and Heischmidt, 2003), partly owed to its simplicity to quickly point out the areas of significance and actual performances. Two important questions are raised in a typical IPA, namely (1) “How important is a certain construct or variable important to the decision maker?” and (2) “How satisfied performance has been achieved in relation to the construct or variable of concern?”. Thus, IPA is a broad-based approach to help researchers, practitioners and policy makers identify constructs or variables to target, and the resources and investments needed for performance realization.

Specifically, IPA provides a mapping scenario to illuminate where and what efforts are to continue, such as by addressing resource allocation and policy decision making. Too much exertion on low-important areas would identify areas of potential overkill, and thus the decision makers could re-allocate resources for alternative purposes that can better bring values to the decision makers. In short, IPA technique is a “basic diagnostic decision tool that facilitates the identification of improvement prioritization, the mobilization and deployment of scarce resources to where they are needed most, and the harmonization of strategic planning efforts to enhance relative competitiveness” (Azzopardi and Nash, 2013, p. 223).

Research Results

Conclusion

In view of the fact that the OBOR implementation phases are still filled with many challenges that still do not have the consensus among the academic scholars and policy makers, this research makes an attempt to provide some theoretical and conceptual directions. Fourfold research objectives are raised:

1. Identify, through literature review, a suitable international relation theory or paradigm that can provide an intellectual guideline for the theoretical conceptions and empirical efforts.
2. Provide some robust empirical evidences to support the direction of OBOR investments and draw the corresponding propositions as guidance.
3. Provide a snapshot of current-state-of-perceptions of the OBOR subject experts in ASEAN and South Asia studies from across China, in the partial aspects of PEST (the macro-environment).
4. Integrate the 1,2,3 objectives and suggest a MODEL for OBOR investments, policy discussions and strategy formulations.

For research objective 1, the “concerted unilateralism” international relations paradigm is assumed to be suited as conceptual and theoretical guideline. The “concerted unilateralism” provides a basis

to integrate the national agendas of other nations, i.e. industry competitiveness, into consideration, and by doing so, it can cushion the impact of doubtfulness of other nations.

To pursue research objective 2, this research exploits nationally available performance indexes, such as GII, GCI, CPI, and LPI, and for research objective 3, TOPSIS, supplemented with IPA and AHP methods, are used, which leads to the following propositions assumed important:

- “OBOR-initiative design and executions should need to sensitize and actively help strengthen the competitiveness drivers of OBOR-participating nations, and in particular, three aspects are to be stressed: (1) travel and tourism competitiveness, (2) global innovation competitiveness, and (3) the governance strength of the public administration.”
- “OBOR initiatives should also prioritize on digitization investments, by exploiting China’s leading digitization-leveraged business ecosystems competences, to help the OBOR-participating countries in improving their national competitiveness”.
- “PEST is integrative in nature, each supports and is related to the other factors, while it remains some subtle differences, at perceptual and actual level, that remains to be the opportunities or challenges to be handled.”

As the current snapshot of perceptions of OBOR’s subject-experts, particularly relating to Research Objective 3, shows an obvious weakness in seeing a structural and strategic pattern on PEST macro-environment, that is believed to be important to stimulate favorable interests and supports for OBOR, we propose a more systematic approach to PEST-induced policy guidance, based on “concerted unilateralism” that stands on structural realist position (research objective 1), and an economic perspective in PEST that underpins on Porter’s Diamond concept. Figure 15 captures this suggested model, which adapts the conceptual basis of Kotler, Katajaya and Setaiwan (2017) that supports a more systematic approach to PEST, as shown in Figure 15, in yielding more aligned outcome in political (i.e. peace), technology and economy (i.e. prosperity), and socio-cultural (i.e. people) domains:

1. Enhance rules and good governance to develop political-security community.
2. Enhance integration and competitiveness of partners and the economy ecosystems.
3. Enhance well-being and livelihood of people.

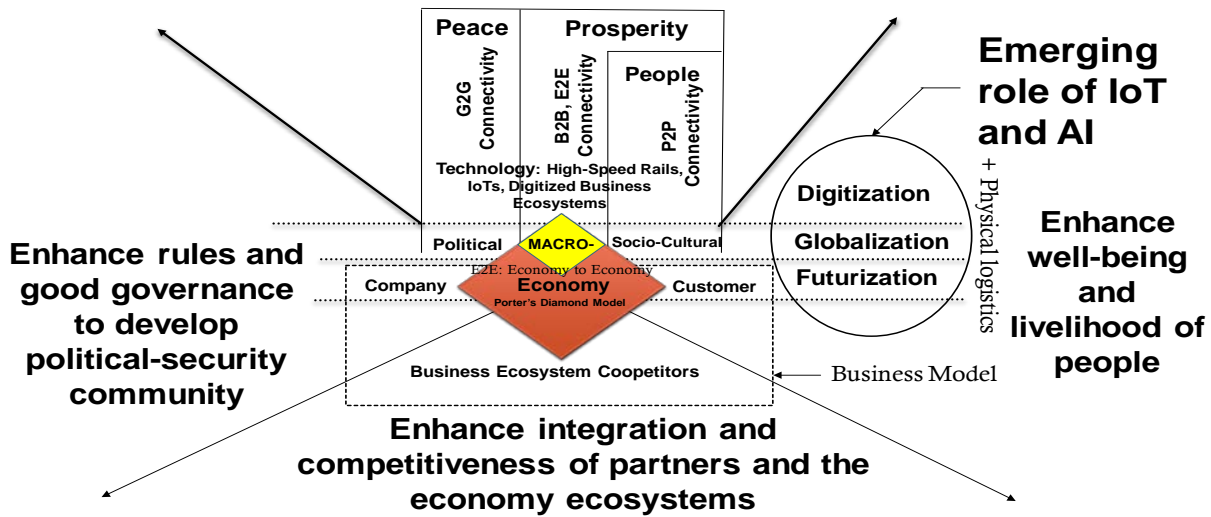


Figure 4 A More-Inclusive Model to PEST Development Enabled by OBOR Initiatives

The inclusive model to PEST development, as shown in Figure 15, is often reiterated by President Xi, for instance:

“The old mindset of zero-sum game should give way to a new approach of win-win and all-win cooperation. The interests of others must be accommodated while pursuing one’s own interests, and common development must be promoted while seeking for one’s own development. The vision of win-win cooperation not only applies to the economic field, but also the political, security, cultural and many other fields. It not only applies to countries within the region, but also to cooperation with countries from outside the region. We should enhance cooperation of macroeconomic policies to prevent negative spill-over effects that may arise from economic policy changes in individual economies. We should actively promote reform of global economic governance, uphold an open world economy, and jointly respond to risks and challenges in the world economy” (Xi, 2015).

Based on the propositions derived, we suggest that a cooperative paradigm should be strategically complemented in the economy policy development. Cho, Moon and Yin (2016) argue that national cooperation is means to develop national competitiveness. Figure 16 presents a cooperative scheme to guide OBOR initiative implementation based on the “concerted unilateralism” paradigm under structural realist position. Figure 16 is a two-way Diamond model framework to help a nation improving its competitive advantage.

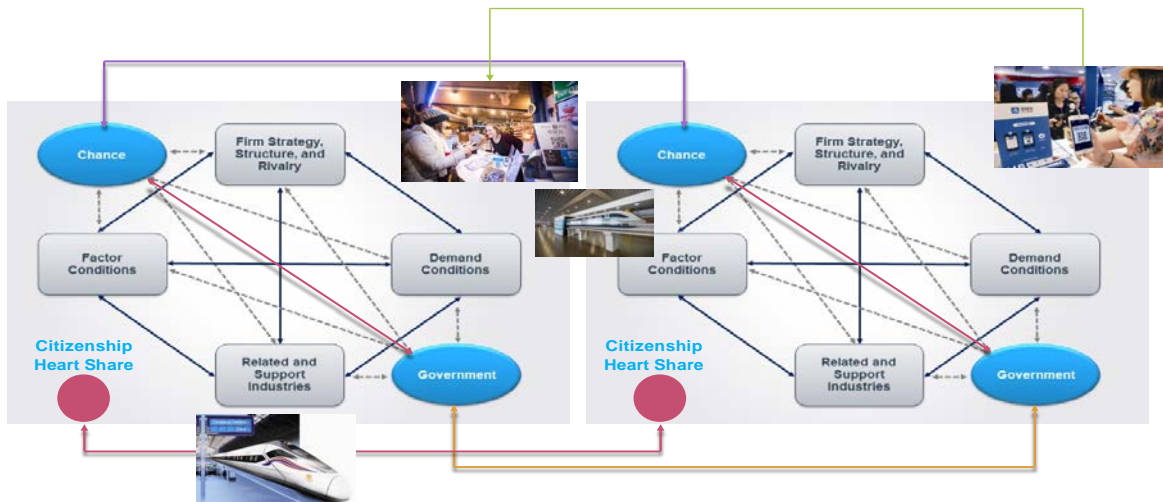


Figure 5 The Connectivity to Enable Industry’s Competitiveness of Participating Countries Specifically, Figure 16 shows a way for pushing forward OBOR Initiatives. In short, through a constructed “world of our making” (Onuf, 1989), a new rationality and reality is formed

Discussion of Research Results

Vines (2016) suggests a concept of concerted unilateralism and international leadership that China could pursue in macroeconomic policymaking in a multipolar world. By “concerted”, Vines (2016) explains that it involves nations and their leaders are brought together through common shared synergies and thus “are prepared to do the necessary work, and if necessary, invest the necessary resources, and to bring about the necessary agreement, of a kind which enables self-interested action to take place in a mutually supportive manner” (p. 7). Underpinned on the similar logic and based on shared prosperity, peace and connectivity mission, as advocated in OBOR initiative principle, it is necessary for China to proactively sense and incorporate the opportunities abroad. Towards this end, we suggest PEST framework as a valid and useful mechanism that could provide some fundamental bases of monitoring to guide China in adjusting strategies to improve OBOR initiative implementation. Particularly, rather than focusing on PEST monitoring and decision-making reactively, the literature review section has articulated and suggested that the PEST can be approached with change-oriented mindset, driven by integrating the four domains of PEST through strategic conceptions. Thus, PEST framework is a valid and useful mechanism as it considers the fundamental macro-level context for laying out the groundworks for competitiveness-oriented approach.

The PEST framework fits the three mixtures of goals and strategies of the Belt Road Initiatives (BRIs): 1) Economic integration, 2) Regional influence (i.e. social and technological), and 3) global geopolitical competition (Flint and Zhu, 2018). As it is argued in Zhao, Tan and Jiang (2018), and Vines (2016), when the economic development plan of OBOR can consider and

integrate the other nation’s competitiveness requirements and potentials, it can project favorable cooperative spirit (Cho, Moon, and Yin, 2016), the geopolitical goals and implications can be effectively met (Glassman, 2011) and can also better re-shape the political, economic, societal and technological competitiveness at international level (Huang, 2015). Cross national cooperation and integration, as many researchers have presented in the context of OBOR, involves a need to “create a multitier inter-governmental mechanism for macro-policy dialogues, deepen shared interests, reach new consensus and promote political trust”, and through infrastructure connectivity, unimpeded trade, financial support, and people-to-people exchange (Huang, 2016). The data presented in this section, and discussed in the following, provides an exploratory attempt to lay out the groundworks on PEST-induced OBOR’s strategy adjustments.

In the PEST context, goal of infrastructure connectivity is probably the most prominent as its functions pervade the influences across the entire PEST domains. Given the low level of infrastructure development in most BRI countries (Zhai, 2018, p.2), as also indicated in Figure 4, BRI can serve to help the OBOR-participating countries remove infrastructure bottlenecks, and in doing so, it can foster further regional economic integration and development.

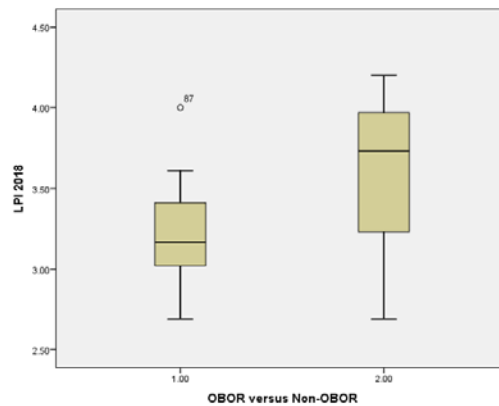


Figure 6 Logistics Performance Index 2018 in Comparison between the OBOR [1] and Non-OBOR Participating Countries [2] (Source: Zhao, Tan and Jiang, 2019)

To study the nature of competitiveness capable to explain the national logistics performance index 2018, we collected globally monitored indexes such as LPI (Logistics Performance Index), T&TC (Tourism & Travel Competitiveness), CPI (Corruptions Perceptions Index), and GII (Global Innovation Index). A careful observation of the innovation input sub-index in the GII 2018 report reveals that its component-wise structure shares the concept advocated in Porter’s Diamond Model (1990). Porter’s Diamond model is generally acknowledged as a useful framework to help a nation building its competitive advantages. The framework is long-term (10 years or more) in basis, and is suitable for public policy development and national attractiveness, and point towards the areas to help firms in a nation build competitiveness and innovativeness (Solvell, 2015). As argued in Cho, Moon and Yin (2016), “Unlike the resource-based view of a

firm, the diamond model deals with not only the firm activities but also other factors related to industries and rivals... In addition, Porter’s new theory on competitiveness has an advantage of being comprehensive by capturing the most important variables or concepts stressed by related existing theories” (p. 484).

There are significant differences across the different regions of OBOR-participating countries listed below, shown in Figure 5

- South Asia – Pakistan, Bangladesh, Sri Lanka, Afghan, Nepal, Maldives, Bhutan
- Southeast Asia – Indonesia, Thailand, Malaysia, Vietnam, Singapore, Philippines, Myanmar, Cambodia, Laos, Brunei, East Timor.
- West Asia and North Africa – Saudi Arabia, UAE, Oman, Iran, Turkey, Israel, Egypt, Kuwait, Iraq, Katar, Jordan, Lebanon, Bahrain, Yemen, Syria, and Palestine.
- Central Asia countries – Kazakhsta, Uzbekistan, Turmenistan, Kyrghyzstan, and Tajikista.

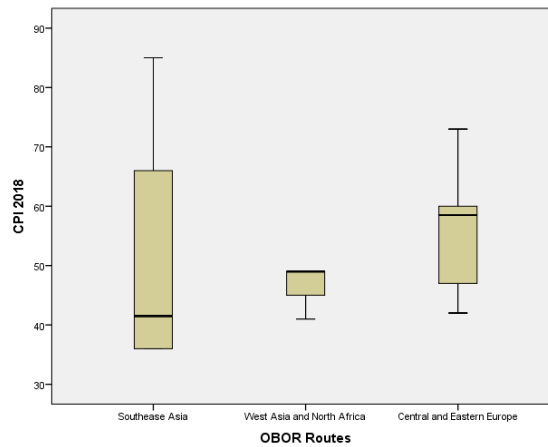


Figure 7 CPI 2018 Comparisons

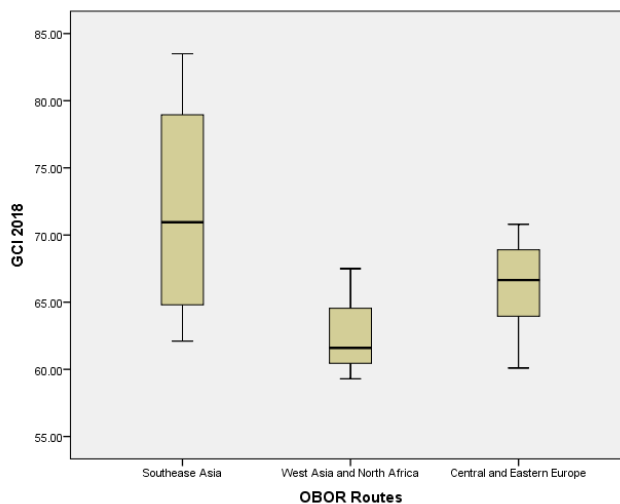


Figure 8 GCI 2018

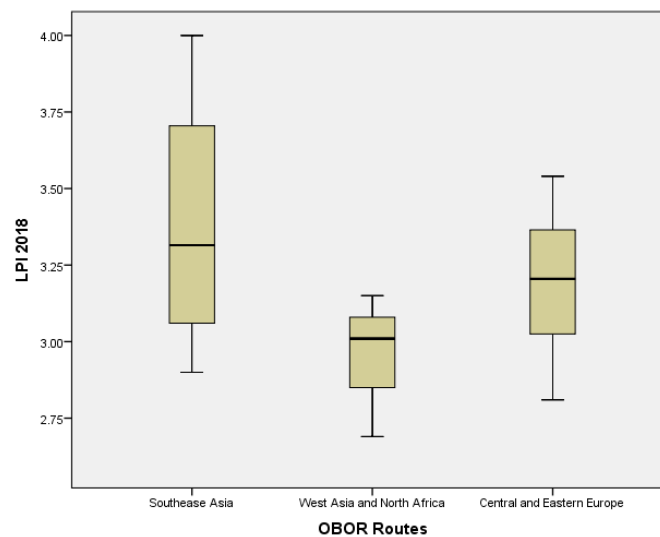


Figure 9 LPI 2018 Comparisons

In view of the above data analysis results, we suggest the first proposition: “OBOR-initiative design and executions should need to sensitize and actively help strengthen the competitiveness drivers of OBOR-participating nations, and in particular, three aspects are to be stressed: (1) travel and tourism competitiveness, (2) global innovation competitiveness, and (3) the governance strength of the public administration.”

Based on Porter’s national competitiveness concept, Tan (2018) identifies two significantly important competitiveness drivers, namely world digital competitiveness index (with Beta of 0.790) and logistics performance index (with Beta 0.190), yielding a $R^2 = 0.898$. Towards this end, we can make a second proposition:

“OBOR initiatives should also prioritize on digitization investments, by exploiting China’s leading digitization-leveraged business ecosystems competences, to help the OBOR-participating countries in improving their national competitiveness”.

Technological investments, especially relating to competitiveness-enabled infrastructures, as shown in the first and second propositions above, are the dominant ones prioritized by the government of China, which includes the “building of railway and highway networks, port facilities, pipelines, airports and energy and communication infrastructure” (Zhao, 2018, p. 2), and also requires “massive funding and long-term commitments, and often entails political risks and diplomatic sensitivities” (ibid, p. 2). Nevertheless, a TOPSIS analysis of the perceptions of the OBOR experts associated with ASEAN and South Asia studies from across China, shows three perceptual differences which may be of potential implications, as indicated in Figure 8. A TOPSIS ranking by technological factors show three distinctive perceptual groups of experts:

While the subject experts share similar pattern of perceptions on political factor (P), i.e. relating to political stability, issue with nationalism, the relationship of ASEAN countries with bigger nations, regional contingencies, public-administration governance, and law enforcement (seen in the Darker Orange), the other PEST factors, namely technology, economics, and technology, share some correlational perceptions.

Nevertheless, the TOPSIS rankings do reflect some subtle differences: (1) Cluster A subject experts show gaps in between technology-social and economics-political perceptions, (2) Cluster B subject experts are homogeneous in their perceptual levels of PEST, and (3) There is a deviation indicated in C, which shows the economics-political-social factors perform better relative to technology. The technological factors considered as relating to intellectual property, the overall technological development standard, efforts of R&D at national level, and technology and skill transfers.

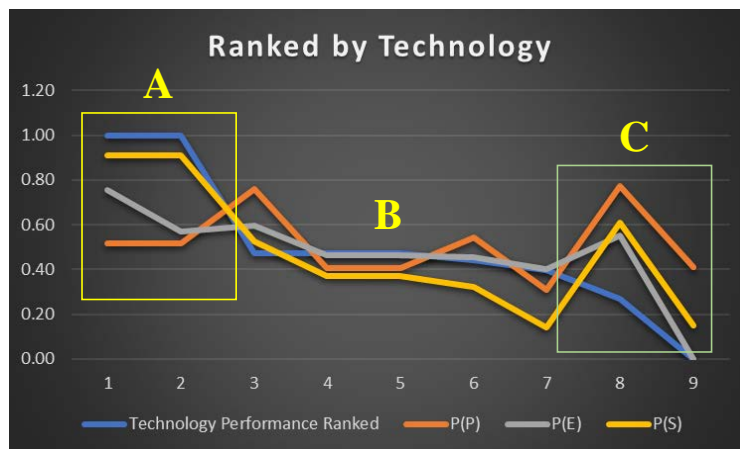


Figure 10 TOPSIS-yielded PEST Analysis, Ranked by Technology.

Note: The graphs show the current performance perceptions of the informants.

Clearly from the TOPSIS analysis of the views of the OBOR subject experts, we can assume another propositional direction – the third proposition:

“PEST is integrative in nature, each supports and is related to the other factors, while it remains some subtle differences, at perceptual and actual level, that remains to be the opportunities or challenges to be handled.”

Below we present the weights according to the perceived important levels opinionated by the OBOR’s subject experts.

Based on the AHP (Analytic Hierarchical Process) method, the importance weightages assigned collectively by the OBOR subject experts on the technological aspects are: 36% to the intellectual property rights protection, 18% to the comprehensive standard of science and

technology development, 16% to both technology transfer and R&D share of GDP, and 14% to the recent patent applications number, in ASEAN regions. The collective AHP calculations and importance weightage plots are given in Figure 9.

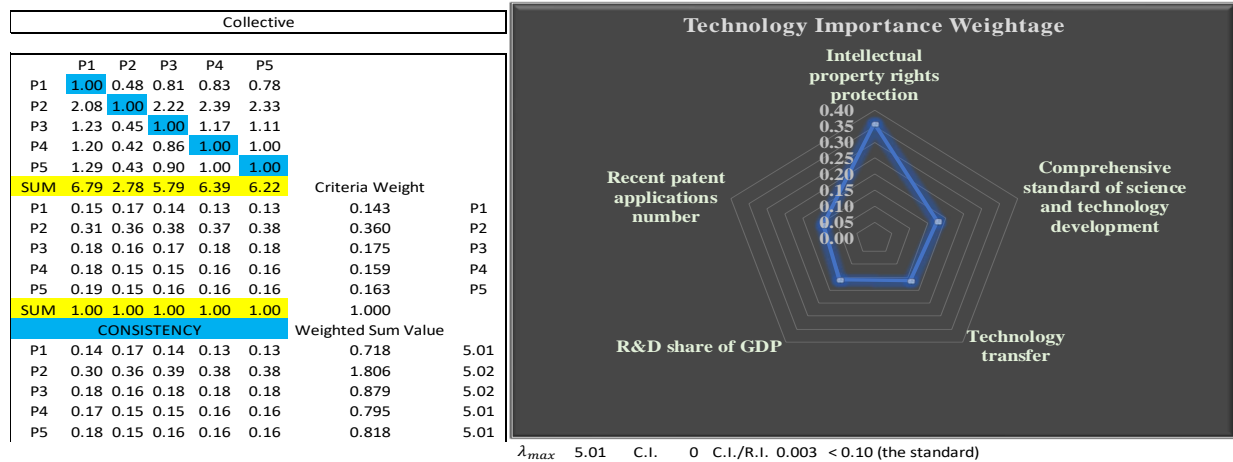


Figure 11 Technological Importance Weightage Obtained from AHP Method

Majority of the OBOR subject experts, as shown in Figure 10, have the perceptions of importance fall on the level between 2-3 (somewhat important to comparatively important), with level 4 at very important level. The perceived actual performance level is shown relative to the perceived importance level for the 9 subject experts in OBOR, which shows that majority of the perceived performance in between 2-3 levels (namely, there is some degree of influence to OBOR and meeting the satisfaction, respectively). Nevertheless, there are two obvious variances among the subject experts, with one group having actual perceived performance at below the important level while the other is opposite in nature.

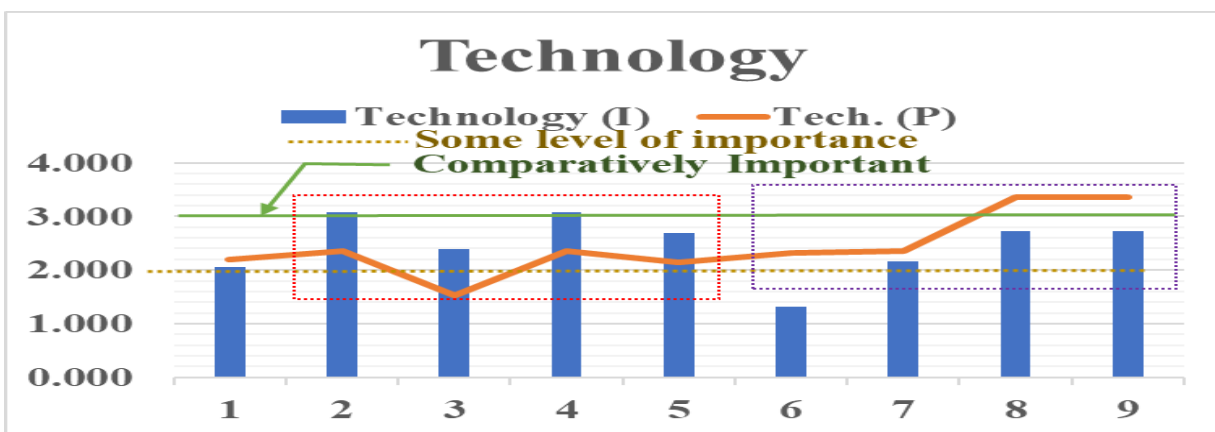


Figure 12 Expert Perceptions on IPA

In the following, we develop further understanding of the PEST by use of Importance-Performance Analysis (IPA) method. IPA was first developed by Martilla and James in 1977. Since then, according to Sulaiman, Jahwari, Sirakaya-Turk and Altintas (2016), IPA method has been widely used in different disciplines due to its simplicity and efficacy in showing the position of assorted attributes in a visually appealing format. In this research, we resolve to only the Radar Chart for the visual expression to facilitate the data analysis process. Shown in Figure 11 is the Radar Chart plot for the IPA of politics (OBOR), which indicates four wider gaps needed to be addressed in helping to move OBOR initiatives moving forward in favorable manner, namely: (1) P1 = the political stability (政局□ □ □), (2) P2 = issues with nationalism (民族主□ □ □), (3) the separatism issue of people in a nation (民族分离主□ □ □), and (4) P7 = the policy stability of the nation (政策□ □ □).

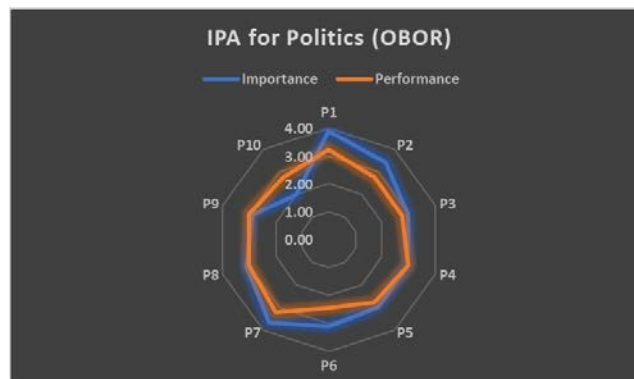


Figure 13 IPA for Politics (OBOR)

In view of the social domain, the P8 (the people’s sensitivity to product quality, 国家民众 □ □ □ □ □ □ □ □ □) is of most concern by the OBOR’s subject experts, as shown in Figure 12.

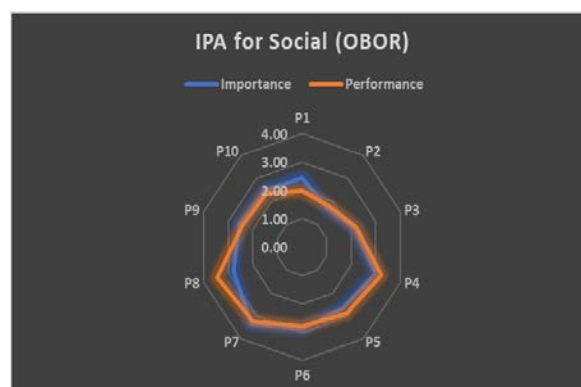


Figure 14 IPA for Social (OBOR)

Lastly in the domain of technology, the wider gap exists for P2, which is patent protection law (□ □ □ □ □), as shown in Figure 13.

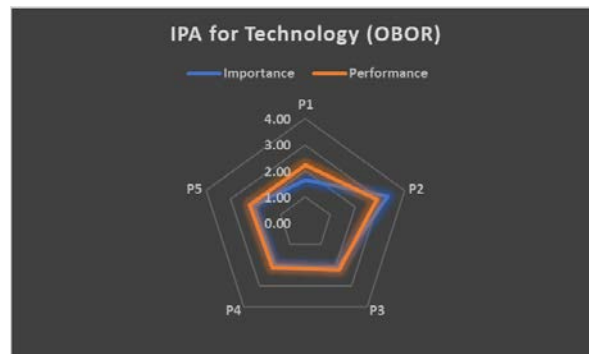


Figure 15 IPA for Technology (OBOR)

Quoted in Han and Guo (2019), “A comprehensive IP protection system has come into shape in China since the 40 years' of reform and opening up, making outstanding achievements to the great undertakings,” said Director General of the World Intellectual Property Organization (WIPO), Mr. Francis Gurry, in a 2018 High-Level Conference on IP for Countries along the Belt and Road.

As to the economics domain, two wider gaps exist in P4 (stability of macroeconomics, 宏观经济) and P10 (import and export factors, 进出口因素). As Helpman and Grossman (1989) pointed out, “not only technology affects trade, but also trade affects the evolution of technology”. The OBOR initiatives have seen an accelerated exports of China’s infrastructural technologies to OBOR countries, but many are in the forms of fund-lending (i.e. some \$8 trillion lending for infrastructure development in 68 countries), which is part of the importing and exporting determinants that can serve as a risk of financing from the borrowing countries.

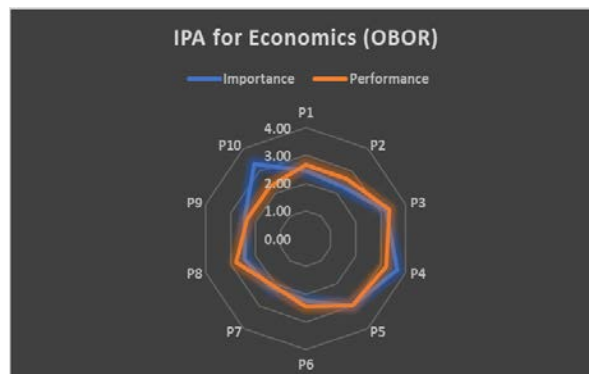


Figure 16 IPA for Economics (OBOR)

Suggestions

By increasing consensus, encouraging the expression of ideas, Belt and road initiatives (BRI), or alternatively known as OBOR (One Belt One Road) initiatives, are China’s grand connectivity project, and if successful, many countries and their industries could be benefited. Being grand and having global scales in influences, there are certainly many challenges ahead. Challenges are made more difficult to tackle, partly due to lacking of consensus, such as at the mindset and paradigm level, and also, the publications still lack of a cohesive model or framework

that is more inclusive or integrative of the significant factors. Paradigm provides an intellectual position for scholars and practitioners to comprehend the nature and scopes of issues, and justify approaches. There are many of such paradigms, such as constructivism, or critical theory.

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