


HUMAN CAPITAL DEVELOPMENT, SPECIAL ECONOMIC ZONES, AND DUBAI AS CASE STUDY: A LITERATURE REVIEW

Fadi Sakka^A, Mohammed Yasin Ghadi^B



ARTICLE INFO	ABSTRACT
<p>Article history:</p> <p>Received 31 January 2023</p> <p>Accepted 27 March 2023</p> <p>Keywords:</p> <p>Human Capital; Industrial Clusters; Special Economic Zones; Knowledge Spillover; Dubai.</p> <div data-bbox="172 1003 480 1249" style="text-align: center;">  </div>	<p>Purpose: This article maps the scholarly conversation on two important topics in the field of economic development: human capital and special economic zones. While these have been studied separately, little work is available on their intersection.</p> <p>Design/methodology/approach: The article is a systematic literature review. It followed the preferred reporting items for systematic review and meta-analysis (PRISMA) criteria.</p> <p>Findings: While human capital development has been largely discussed from the perspective of developed countries, it hasn't been examined specifically in connection to SEZs. Moreover, there is solid evidence of the positive impact of industrial clusters, suggesting that SEZs that pursue the formation of industrial clusters might have the strongest effect on human capital development. The piece argues the intersection of human development and SEZ establishment is currently a gap in the literature calling for further empirical investigation</p> <p>Originality: The literature review is brought to bear on the experience of the Emirate of Dubai, in order to highlight features of its development history that make it an ideal case study for empirical investigation.</p> <p>Doi: https://doi.org/10.26668/businessreview/2023.v8i4.613</p>

DESENVOLVIMENTO DO CAPITAL HUMANO, ZONAS ECONÔMICAS ESPECIAIS, E DUBAI COMO ESTUDO DE CASO: UMA REVISÃO DE LITERATURA

RESUMO

Objetivo: Este artigo mapeia a conversa acadêmica sobre dois tópicos importantes no campo do desenvolvimento econômico: capital humano e zonas econômicas especiais. Embora estes tenham sido estudados separadamente, pouco trabalho está disponível em sua interseção.

Design/metodologia/abordagem: O artigo é uma revisão sistemática da literatura. Ele seguiu os itens preferidos para revisão sistemática e critérios de meta-análise (PRISMA).

Conclusões: Embora o desenvolvimento do capital humano tenha sido amplamente discutido a partir da perspectiva dos países desenvolvidos, ele não foi examinado especificamente em conexão com as ZEEs. Além disso, há evidências sólidas do impacto positivo dos clusters industriais, sugerindo que as ZEEs que buscam a formação de clusters industriais podem ter o efeito mais forte sobre o desenvolvimento do capital humano. A peça argumenta que a intersecção do desenvolvimento humano com o estabelecimento das ZEEs é atualmente uma lacuna na literatura que exige mais investigação empírica

^A Assistant Professor, HR Mark, Dubai, UAE. E-mail: fadi.sakka@gmail.com

Orcid: <https://orcid.org/0000-0002-4463-6217>

^B Associate Professor, Department of Business Administration. School of Business. Mu'tah University, Al-Karak, Jordan. E-mail: mghadi@hbmsu.ac.ae Orcid: <https://orcid.org/0000-0002-9939-7938>

Originalidade: A revisão da literatura é feita com base na experiência do Emirado de Dubai, a fim de destacar características de sua história de desenvolvimento que o tornam um estudo de caso ideal para a investigação empírica.

Palavras-chave: Capital Humano, Clusters Industriais, Zonas Econômicas Especiais, Difusão do Conhecimento, Dubai.

DESARROLLO DEL CAPITAL HUMANO, ZONAS ECONÓMICAS ESPECIALES Y DUBAI COMO ESTUDIO DE CASO: REVISIÓN BIBLIOGRÁFICA

RESUMEN

Propósito: Este artículo traza un mapa de la conversación académica sobre dos temas importantes en el campo del desarrollo económico: el capital humano y las zonas económicas especiales. Aunque se han estudiado por separado, se dispone de pocos trabajos sobre su intersección.

Diseño/metodología/enfoque: El artículo es una revisión sistemática de la literatura. Se han seguido los criterios de revisión sistemática y metaanálisis preferidos (PRISMA).

Conclusiones: Aunque el desarrollo del capital humano se ha debatido ampliamente desde la perspectiva de los países desarrollados, no se ha examinado específicamente en relación con las ZEE. Además, existen pruebas sólidas del impacto positivo de las agrupaciones industriales, lo que sugiere que las ZEE que persiguen la formación de agrupaciones industriales pueden tener el mayor efecto sobre el desarrollo del capital humano. El artículo sostiene que la intersección del desarrollo humano con el establecimiento de ZEE constituye actualmente una laguna en la bibliografía que requiere una mayor investigación empírica.

Originalidad: La revisión bibliográfica se basa en la experiencia del Emirato de Dubai para poner de relieve características de su historia de desarrollo que lo convierten en un caso de estudio ideal para la investigación empírica.

Palabras clave: Capital Humano, Agrupaciones Industriales, Zonas Económicas Especiales, Difusión de Conocimientos, Dubai.

INTRODUCTION

The background of this paper is that The United Arab Emirates ('UAE') is one of the fastest growing economies amongst emerging countries. The development of suitable human capital helps propel and sustain this economic growth, as spelled out for example in Dubai's Strategic Plan for 2021 (Government of Dubai, 2021). One important way in which this goal has been pursued is through the establishment of special economic zones ('SEZs'). Dubai's policy of building SEZs rests on the assumption that this will also result in human capital development (Government of Dubai, 2021).

These initial considerations motivate further inquiry into two related areas: human capital and special economic zones. Investment in human capital is regarded as the principal recipe for success in an increasingly competitive economic environment, and modern economic models forecast that future growth will be highly correlated to it. Empirical research also indicates that countries are increasingly paying attention to this factor on a policy level, and acknowledging that natural resources can no longer be considered the main contributor to growth.

As for the second area of inquiry, studies on SEZs suggest that they raise employability, foster human capital development, and the economic growth of the host country. Foreign direct investment funnelled through SEZs attracts multinational enterprises ('MNEs'). In turn, these firms usually bring in modern technology, management techniques, international standards, and state-of-the-art business processes. In order to operate well within SEZs, firms need to train and equip the host country's human resources with the required skills. This sparks investment in education, and formal and on-the-job training that raise human capital.

The objective of this review article is to bridge add up to thie shortfall of related studies attempting to investigate developing countries SEZs significance to Human capital development. Therefore, the justification is to claim a ground for further empirical inquiry at the intersection of these two domains (an invitation that will be taken up in a forthcoming case study). On the one hand, most of the work done on human capital development is related to developed countries. On the other, little research exists on SEZs in emerging economies, such as the UAE. Moreover, existing studies do not specifically attempt to investigate the empirical relationship between SEZs and human capital development.

The justification of this paper is that Dubai is renowned among Arabian Gulf countries for its consistent implementation of SEZs over three decades. Hence, after drawing attention to the existing gap in the literature, this article also argues that Dubai constitutes a particularly fertile case study better to understand the relationship between human capital development and SEZs.

For this purpose, Section 1 reviews how the notion of human capital development has evolved through modern economic history, from a background constant to a crucial variable behind economic development. Section 2 examines instead how developing countries such as the UAE (and the Emirate of Dubai) might pursue human capital development, including through SEZs. It also explores the channels of knowledge accumulation that link SEZs and human capital growth. Finally, Section 3 offers a sketch of Dubai's appeal as an empirical case study, paving the way for further empirical work.

MATERIAL AND METHODOLOGY

This systematic literature search review followed the preferred reporting items for systematic review and meta-analysis (PRISMA) criteria. The Scopus and Google Scholar databases, which were the most commonly used search databases, were used in this study. The search was conducted between July 1 and July 10, 2020. An advanced search in Google Scholar,

with the exact phrase "human capital " and " economic zones" resulted in 152 articles for the period 2010 to 2020; "human capital development" and "Dubai" resulted in 33 results; "human capital development" and "country growth" yielded 177 results. A parallel search of the Scopus database, using the same keywords, was also conducted. Refining further to the business and management context, 92 scientific articles were considered from Scopus and 88 from Google Scholar. The reference management software was used to eliminate duplicate data from the revised sets. The Scimago Publication Ranking for each journal was then carefully checked to confirm that the collected data for the present study existed in standard journals or SSRN. Articles that did not specifically address human capital development in Dubai context

Based on the time period, human capital development is studied from four different perspectives: country growth, economic modelling, host country human capital, firms characteristics, research and development, industrial clusters and knowledge spillover and host country national culture.

LITERATURE REVIEW: HUMAN CAPITAL DEVELOPMENT IN SPECIAL ECONOMIC ZONES

Contemporary models of economic growth favour knowledge economies, with human capital growth and research and development (R&D) replacing heavy manufacturing, industrial production, and reliance on natural resources. Developed and developing countries alike have been focusing on human capital development to establish a competitive advantage (Khodzhaevich et al., 2020; Sengupta, 2011).

Human capital stock can be captured via the following variables: education, knowledge accumulation, formal and informal training, learning-by-doing, and skilled labour. Human capital also displays a strong link to technological change, encouraging it through the channels of R&D and innovation (Khodzhaevich et al., 2020).

Romer (1990) argues that, in the long run, it is human capital accumulation and technology that drive country growth, rather than the investment in physical capital, or a larger workforce. Empirical research confirms countries' economic policies have been explicitly targeting human capital growth (Chu & Wang, 2022; Lucas, 1988; Romer, 1986; Nelson & Phelps, 1966). Natural resources are therefore no longer the main factor of growth. In this respect, resource-abundant countries usually centre their economy on extractive industries. However, this may eventually lead to 'Dutch disease', where resource-rich countries end up showing a slower rate of growth. (Shahbaz et al., 2019; Sachs & Warner, 2001; 1999)

Various opinions exist around how human capital development might eventually translate into economic growth (Khodzhaevich et al., 2020; Chu & Wang, 2022). Endogenous growth theorists, Romer (1986) and Lucas (1988), suggest that the accumulation of human capital fosters growth by increasing the productivity of workers, as well as innovation at the level of product design. Other scholars have focused more closely on the relationship between human capital and technological change (Das & Drine, 2020; Becker, 1964; Nelson and Phelps, 1966; Lucas, 1988; Romer, 1986, 1987, 1990, 1994; Aghion and Hewitt, 1992). Among these, Nelson and Phelps (1966) argue that increasing the stock of human capital supports a country's capacity to innovate and so pushes its rate of growth. They then conclude that development and preservation of human capital makes a difference in countries' growth levels, with developed countries displaying higher productivity as a result of more intensive human capital development. It is unclear, however, whether education and knowledge accumulation are determinants or consequences of technological change (Bos et al., 2016).

Romer (1990) believes that countries should invest in human capital primarily in terms of R&D. New product designs, more efficient operational procedures, and innovative services would all be outcomes of R&D investment. Aghion and Hewitt (1992) present a model where the growth rate is a function of the level of innovation, the size of skilled workforce, and the volume of research activities. They classify labour into three categories: unskilled labour (on the production line), skilled labour (at the intermediate level of operations or research activities) and specialised labour (for research activities). They presume that research needs skilled labour to catalyse a random sequence of innovations that might drive economic growth.

These considerations pose the question as to how to increase human capital. In this respect, both Becker (1964) and Lucas (1988) concur that education, formal and informal training support human capital development and, in turn, economic growth. Lucas (1988) ascribes differences in countries' growth rates to differentials in the accumulation of knowledge, on the basis of a strong relationship between productivity and human capital accumulation. Productivity increases with the level of educational attainment, especially when enrolment levels in secondary and higher education are strong (Sakamoto, 2018).

In addition, Romer (1986) and Lucas (1988) introduce within their models the notion of 'knowledge spillover'. This means that, while the direct effect of education is primarily on an individual's productivity level, the secondary effect is felt on the group with which an individual interacts (Sakamoto, 2018). Hence, human capital development also translates into group learning through knowledge spillover. On this basis, Lucas (1988) concludes that a

country's human capital is sustained through formal education and learning-by-doing (which accounts for the demonstration effect behind knowledge spillover).

Economic growth models ascribe different degrees of importance to human capital. Classical and conventional growth models look at it as a background constant outside of the model. Instead, it features in neoclassical, Schumpeterian, evolutionary, and modern growth models as the main driver behind sustainable economic development (Sredojević et al., 2016; Romer, 1990; Freeman and Soete, 1997).

Conventional models presuppose diminishing returns on resources. This means that increments at the level of inputs (labour, capital, land) yield marginally less output (Chowdhury, 2020). The assumptions of decreasing returns and rising marginal costs bring the economic model to an equilibrium position. In these models, human capital and technology are background constants, and so matter less than physical capital (Lazareva & Lozovitskaya, 2020; Smith, 1910; Swan, 1956). Robert Solow factors technology in an exogenous growth model where capital is subjected to diminishing returns. However, he still looks at technology as a given, outside the dynamics of the model (Solow, 1957).

Unlike Solow's model, where technology and human capital are given, the endogenous growth model factors knowledge and technology directly as model variables. Moreover, these two feature in the model with increasing returns, compared to the diminishing returns of physical capital in previous models (Bella et al., 2019). This setup invites policy makers to pay close attention towards knowledge creation through education, and formal and informal training (Romer, 1986; Lucas, 1988).

The basis of increasing returns on technology is that, once an innovation is developed, the cost of producing subsequent units decreases with every additional unit produced. Hence, business competition happens less on price, and more on differentiation of product and service offerings (Kuwahara, 2018; Arthur, 1996). On this basis, Romer (1994) argues that value creation is what really raises the growth profile of an economy. Stimulation through investment, taxes, spending incentives, and other macro-economic tools does not automatically translate into reliable growth, unless sustained through a stream of innovations. This is why endogenous growth theorists refuse to leave knowledge accumulation and technological advancement unaccounted for as external constraints, as in exogenous growth models.

Nelson and Winter (1985) apply biological evolution to economic modelling (evolutionary growth theory). They suggest that macro-economic behaviour, the behaviour of economic actors (firms, workers, and consumers) and the overall trajectory of the economy

follow an evolutionary path. The presupposition on which this theory is built is that experimental exercises, learning, and R&D play an essential part in economic growth and in the evolution of economic actors. In particular, knowledge acts as a bottleneck for firms' attempts to maximise profit. Firms follow various paths of business development, constrained by the knowledge they have. When a path fails, business activity shifts to another path, similar to the way biological evolution works. In this model, change occurs abruptly rather than as a continuous function: new technologies, products, and services reconfigure firms' relation to their market, and this is what makes some grow and others disappear (Chatziniolaou & Vlado, 2019; McKelvey & Saemundsson, 2018).

SEZs are geographically delimited areas, administered by a single body, which offer certain incentives (e.g. duty-free importing or streamlined customs procedures) to businesses set up within the zone. There are a variety of terms used to describe the kind of institutional arrangement that's consistently referred to, in this paper, as a 'special economic zone' (SEZ). Among such terms are the following: free trade zones, export processing zones, enterprise zones, free ports, single-factor export processing zones, specialised zones. The term 'special economic zone' better highlights the economic rationale of one such arrangement, and the specialised mission through which it operates (Turgel et al., 2019; Frick et al., 2018).

SEZs are viewed as a strategy to invite foreign direct investment (FDI) and technology transfer, and so boost human capital (Frick et al., 2018; Fias, 2008, Ibrahim, 1994). FDI is specifically a source of technology transfer, either directly or through spillovers. There are many determinants of FDI inflow: host country natural resources, the connectedness to import/export markets, and the host country's human capital stock, among others (Song et al., 2020). Instead, poor levels of labour productivity deter FDI inflows (Lucas, 1990). Zhang and Markusen (1999) also confirm that the availability of skills and education in the workforce is a major determinant of FDI inflow. Dunning et al. (1998) add that the same factors also play a role in determining what type of economic activities might best take root in a country.

SEZs attract FDI by enticing MNEs. These, in turn, raise the average productivity of the host economy by importing capital as well as advanced and proprietary technology—which might be transferred through licensing, supplier networks, or subcontracting arrangements (Bartlett et al., 2019; Gugler and Brunner, 2007). Case studies have confirmed that foreign firms based in SEZs might introduce new know-how, stimulate competition, and transfer production techniques and management skills; as a result, more countries are adopting the SEZ model as a lever for growth (Gugler and Brunner, 2007). Furthermore, SEZs are advantageous

for developing countries for both policy and infrastructure development reasons. Policy-wise, SEZs allow controlled diversification of the national economy whilst maintaining protection barriers outside the SEZ. This is why developing countries use SEZs as a test bed for economic policies that might later be extended countrywide. Finally, SEZs improve backward supply chain connections with other industrial clusters in the same country. Infrastructure-wise, SEZs generate demand for modern infrastructure and utilities to attract MNEs (Madani, 1999; Fias, 2008).

One of the main expectations pinned on SEZs is that they will raise host country human capital through the supply of technology, knowledge, and skills. However, this remains a disputed question (Madani, 1999). For instance, empirical studies have shown that the role of MNEs (attracted through SEZs) in the establishment of industrial clusters is not evident, when the presence of clusters is taken as an enabling factor for productivity spillovers from FDI (Hong et al., 2019). Productivity spillovers occur more easily when pre-existing industrial clusters are present, or in SEZs where MNEs outsource R&D activities to the host country (Larkin, 2020). These conditions facilitate the permeability of the domestic economy to innovation, and thereby improve its human capital (Gugler and Brunner, 2007).

Along similar lines, Ding *et al.* (1997) track the evolution of human resource management (HRM) practices within China, as a result of the know-how brought through SEZs. Before China's economic reform in 1978, planned job allocation, guaranteed lifetime employment, and a centrally planned pay system were commonplace. Foreign enterprises based in the Shenzhen SEZ were the first to introduce recruitment strategies, compensation levels and programmes, performance appraisal, promotion criteria, and training and development activities (Wu, 2020). This is an illustration of how a country's HRM practices were transformed through SEZs, with foreign firms bringing in modern management techniques, and eventually influencing the host country's employment culture (Ding *et al.*, 1997).

RESULT AND DISCUSSION

The structured literature review indicates that the development of the host country's human capital can be demonstrated by the special economic zones' features with many elements. The following details these elements which are: the firms' characteristics, level of Research and Development activities taking place within the zones, the industry cluster level, knowledge spill-over from best practices of multinational companies, and the national culture of the host country

Human Capital and Firms' Characteristics

The more advanced the technology firms employ, the greater the demand for skilled labour. MNEs tend to resort to more capital-intensive production methods than domestic firms. In turn, capital-intensive production demands a richer skillset, which is why MNEs need to provide extensive training for their staff, thereby increasing average labour productivity (Larkin, 2020, Patibandla and Petersen, 2002). This, in turn, makes possible productivity spillovers with the host country through skilled staff mobility from MNEs to domestic firms (Gugler and Brunner, 2007).

Porter (1990) suggests the volume of invested capital (FDI) can act as a proxy for firms' willingness to invest in people, in order to reap suitable returns from the original investment. Revenue generated per employee is another variable that correlates positively with human capital development: for firms to generate a considerable amount of revenue, they need to train highly skilled employees that will raise the productivity rate (Bartlett et al., 2019, Engman and Pinali, 2007). A meta-analysis of 66 studies with 68 samples, for a total of 12,163 observations, allows Crook *et al.* (2011) further to clarify the relationship between human capital and firm performance measures. In particular, they report a strong correlation between human capital and financial performance. Their findings also suggest that firms should develop human capital focused on business-specific know-how, in order to obtain a competitive advantage.

R&D Impact on Human Capital Development

Firms are commercially incentivised to invest in R&D to build strategic and technological advantages that translate into new product or service offerings (Hong et al., 2019; Pisano, 1990). Romer (1990) adds that when firms are incentivised to pursue R&D investments, their employees will need training in the new technologies. Hence, R&D investment is generally a positive influence on human capital development. This turns the question on the conditions that might call forth such an investment in R&D.

Un and Cuervo-Cazurra (2008) argue that MNEs compete against each other in terms of their investment in R&D. They also routinely pursue economies of scale through the establishment of foreign subsidiaries, including through SEZs. Some subsidiaries of MNEs, through benefitting from better access to capital by virtue of their belonging in a multi-national business network, are in a position to invest in R&D substantially more than competing domestic firms. Other subsidiaries might prefer, instead, to choose technological dependence from the mother company and so cut back on R&D investment, compared to domestic firms.

Hence, the type of relation a subsidiary entertains with its parent company is a defining factor in determining the former's R&D profile (Doz *et al.*, 2001).

The context provided by government policies, domestic firms, trade associations, and the availability of suitable human resources are other key determinants of investment in R&D (Freeman, 1987; Lundvall, 1992; Nelson, 1993).

For instance, tariffs and trade barriers do not incentivise investment in R&D because they slow down competition. Hence, firms operating in a protectionist context might prefer to become consumers of technology, rather than develop their own (Cunningham and Maloney, 2001). Instead, firms located within a competitive ecosystem tend to be much more agile vis-à-vis technological advancement (Nauwelaers and Wintjes, 2002; Mattsson, 2007).

Industrial Clusters and Human Capital

Porter (1990) coined the term 'cluster' to describe a group of interconnected firms 'clustered' in a geographic area, whether a region, a state, or a city. The geographic extension of a cluster is proportional to the distance over which the clustered companies are able to achieve economies between them (Engelberg *et al.*, 2018; Weber, 1909). Marshal (1890) considered the causes that lead to the emergence of such industrial clusters or districts, such as: natural resources, special legal regimes, connections to a supply chain, or a combination thereof. The decision to locate itself in a district or cluster is driven by a firm's anticipation that certain advantages might be better pursued in this way (Weber, 1909). Possible advantages include: economies of scale, access to skilled workforce, presence of a common culture and shared business practices, and a unique local reputation, among others (Hoover, 1970; Storper, 1999). Among industrialised countries, Italy is reputed for its industrial districts producing such goods as tiles, shoes, or furniture, without compromising on quality and without pushing salaries downward (Cavallo *et al.*, 2020; Piore and Sabel, 1984). Industrial clusters behave as agile business conglomerates that can adapt well to changed market demands, a feature that reduces risk and increases efficiency (Humphrey and Schmitz, 1995; Schmitz, 1997).

The connection of industrial clusters to human capital development stems from the fact that these provide the ideal environment for the circulation of knowledge among firms in the same cluster (Otsuka & Sonobe, 2018; Malmberg and Maskell, 1999, 2006; Pinch and Henry, 1999; Keeble *et al.*, 1999). Industrial districts combine competition and collaboration in a way that affords an edge in the pursuit of innovation (Porter, 1990, 1998, 2000). This is because the advantages firms enjoy within a cluster are harder to replicate by competitor firms that operate

according to different principles of geographical spread and concentration. Industrial clusters afford more resilient vertical connections with the supply chain. Cluster firms also exploit horizontal synergies with other firms, either by being able to offer complementary products, or through being able to access capital, technology, and labour more easily as part of the cluster (Otsuka & Sonobe, 2018; Bergman and Feser, 1999). In sum, industrial districts often display competitive levels of static productivity, incentives to innovation and growth, and an ecosystem favouring enterprise creation (Porter, 2000).

In the UAE, cluster development has been pursued through a range of initiatives. Among these is also the establishment of SEZs. After the first one in 1985, the strategy was replicated with other SEZs incentivising the formation of industrial clusters, such as Dubai Internet City and the Dubai Financial Market (Porter, 2003). This strategy exemplifies how SEZs can be used strategically to channel FDI towards the formation of industrial clusters (Al-Saleh, 2017).

Knowledge Spillover In SEZs

One of the way SEZs impact human capital development is through the phenomenon of 'knowledge spillover'. A possible manifestation of this spillover is through worker mobility between firms and between sectors (Frick & Rodríguez-Pose, 2019; Aggarwal, 2007). In particular, when firms are part of a cluster, know-how will initially circulate amongst firms of the same cluster, and then trickle to firms outside it, thereby raising human capital levels in the host country as a whole. Marshall (1980) has described some of the benefits of knowledge spillover, in terms of lower transaction costs for initiating collaborations and receiving feedback, and of an ecosystem favourable to new enterprise creation.

Blomstrom and Kokko (1998) have attempted a classification of spillover into product and market spillover. The former happens when firms are able to enhance productivity through regular exchanges with other firms located upstream and downstream along their supply chain. In particular, the interactions between firms, suppliers, clients, and buyers trigger knowledge spillover through uptake of one another's technological upgrades and cross-hiring. Instead, market spillovers happen as a result of competition between domestic firms and MNEs. As a consequence of the entry of MNEs, domestic firms are incentivised to learn more about MNEs' export markets, and can thus be motivated to compete with the latter on those markets.

A different classification is put forth by Griliches (1979), who distinguishes between rent and pure spillover. Rent spillover happens as a result of bilateral international trade flows,

through transactions involving the exchange of goods. Instead, pure spillovers arise chiefly from imitation, reverse engineering, and labour mobility of R&D staff.

An oft-rehearsed argument in favour of knowledge spillover suggests that competition with MNEs forces domestic firms to innovate, for instance by targeting product differentiation. In particular, competition for FDI flows and increased export opportunities should generate a demand for higher quality standards and state-of-the-art management techniques. In this respect, some authors have argued that these processes do not really amount to a spillover effect, disclaiming evidence of technology and human capital upgrades as a result (Gugler and Brunner, 2007). Furthermore, Aggarwal (2007) has also critiqued the argument that the establishment of MNEs in SEZs stimulates technology transfer, on grounds that MNEs might use SEZs to establish low-skill, assembly-type operations that do not generate any spillovers.

Porter (2000) provides a partial rebuttal to these objections, by drawing attention to the dynamics that can take place between firms, whenever SEZs lead to the establishment of an industrial cluster. In that case, firms will compete for 'local social standing', and promote innovation, skills enhancement, and knowledge creation as they seek to build strategic competitive advantages and to occupy a specialised niche. These kinds of dynamics, whereby firms compete on quality and economies of scale without driving wages down, exemplify the sort of process through which SEZs might positively affect host country human capital. Granovetter (1973) suggests additional ways to think about spillover inside business clusters, focusing closely on the potential for weak ties to act as a 'spillover vehicle'. Informal meetings or events facilitate sharing of operational knowledge (Schmitz, 1997). Frequency of interaction is another contributing factor (Storper and Venables, 2003). Finally, the onset of a common language within a cluster in which suppliers, providers, and customers are shared is one more facilitating mechanism for knowledge spillover (Malmberg and Maskell, 2006; Morgan, 1997).

Formal connections between firms located along a horizontal or vertical chain might be another significant channel for the diffusion of knowledge, skills, and best practices through innovation or imitation (Ali, 2021; Von Hippel, 1998). In addition, the circulation of workers within a cluster, and their formal or informal exchanges, also creates a valuable critical mass of skilled labourers with cluster-specific industry expertise (Angel, 1989; Capello and Faggian, 2005; Feldman and Francis, 2004). Of course, workers' cluster-specific industry expertise may not be transferrable outside of the cluster. However, such specialisation also produces significant spillover effects in terms of the emergence of similar firms, vocational training institutes, universities with relevant curricula, standards agencies, and trade associations

(North, 2005). These dynamics make industrial clusters an ideal ecosystem for knowledge spillover and human capital development (Konstandina & Gachino, 2020; Giuliani and Bella, 2005). Gachino (2006) has gone to great lengths to trace the pathways through which knowledge spillover occurs. In his study, he outlines four main channels: competition among firms, connections along the supply chain, labour mobility, and demonstration effects. Moreover, he looks at how these spillover pathways transform firms' productive capabilities by setting in motion production and process changes, as well as on innovation at the level of industrial engineering, new marketing strategies, and management and organisation practices. Last, but not least, Porter (1998) suggests that knowledge generated within industrial clusters can eventually consolidate a reputation and become part of a country's competitive advantage (Porter, 1998).

Host Country National Culture

The impact of MNEs on a country's economy and human capital is also affected by cross-cultural issues. That is because MNEs tend to bring with them features of the professional culture of their place of origin. Faced with incompatible cultural expectations, workers may respond either through adaptation or through leaving (Economides, 2008). In the latter case, this may bring about the flight of qualified workforce—a problem that's particularly evident in multicultural centres such as Dubai. Franke *et al.* (1991) also add that cultural differences are an oft-overlooked factor, when accounting for why countries with similar access economic resources end up performing differently.

The impact of cultural differences on economic performance has been studied empirically in a seminal work by Hofstede (1980). He approaches culture as a form of programming that individuals are socialised into, depending on their belonging to a group, and distinguishes different dimensions of interaction where culture makes a difference. In particular, his study is based on data from 53 countries and regions and more than 116,000 data points from IBM employees, collected between 1967 and 1973. In this cross-country analysis, Hofstede (1980) scrutinises data along two dimensions: uncertainty avoidance and individualism/collectivism. Arab countries feature in his study as collectivist and high on uncertainty avoidance. According to the author, these traits indicate risk aversion and resistance to change—manifested through slow decision-making processes and spread-out networks of accountability. In such contexts, regulatory bodies play a prominent role in setting a direction for change, as opposed to individual initiative. At the same time, human capital development is

most effective in the presence of moderate- to high-risk individuals who are willing to learn, upgrade their skills, and make difficult decisions—traits typical of individualistic societies. Hence, Hofstede's study seems to suggest that human capital development is sensitive to cultural conditions.

Beyond this seminal work, there is a lack of more specific empirical studies examining the effects of cross-cultural issues on the pursuit of human capital development via SEZs. For instance, while Porter (1990) has studied at length competitive advantage on a country level, he hasn't really discussed the part played by differences in culture and values.

The effects of local culture have been studied more closely in relation to industrial clusters. Indeed, clusters give rise—through collaboration—to a culture of shared habits, management practices, and standards. The cooperation that generates this shared ground occurs at the firm and at the individual level (Storper, 1995, 1999). Another term for this phenomenon is 'social capital' (Coleman, 1988). In addition, firms within a cluster don't just partake in the industry-specific culture of their cluster, but also in the wider regional culture of the area in which they are located—a phenomenon that has been called in the literature 'cognitive proximity' (Boshma, 2005). This term captures both the effects of informal exchanges within a geographic area (Saxenian, 1991) and within the same industry (Morgan, 1997).

Dubai As Case Study On The Impact of Sezs On Human Capital Development

In the light of the issues discussed in the literature, this section turns to consider the features of the Emirate of Dubai that make it an ideal case study to explore the connection between the establishment of SEZs and human capital development. The reason for this is that Dubai has long been pursuing economic growth through incentivising innovation and human capital development in an attempt to diversify its economy away from the exploitation of oil reserves. Among the policies employed to achieve this goal is also the proactive establishment of SEZs.

Oil has been the main engine of economic development in the UAE, and particularly in the Emirate of Abu Dhabi, for a period of at least thirty years. Dubai is less oil rich than Abu Dhabi (with reserves in the order of 1/20th those estimated in Abu Dhabi). Dubai's economy was traditionally based on fishing, pearling, and textile trading. Given the comparative scarcity of oil compared to the neighbouring emirate of Abu Dhabi, Dubai has been actively looking for ways to diversify its economy. This has been done through the development of a modern infrastructure, road and transportation network, and communication services, alongside an

efficient local administration (Government of UAE, 2020; Porter, 1998). All of these efforts have been geared to attract FDI into its non-oil-related economic sectors.

Dubai's economic transformation can additionally be attributed to ambitious initiatives, such as the dredging and refurbishment of the Creek, the establishment of Jebel Ali Port as the biggest man-made dock in the Middle East, and the foundation of 24 SEZs, each specialising on a particular cluster of industries (Al-Saleh, 2017; Matly and Dillon, 2007).

After initial doubts accompanying the establishment of the first SEZ in 1985 (Jebel Ali), the Dubai model of SEZ has set the standard for the rest of the UAE, with other federated emirates replicating it in analogous initiatives. In 2010, Dubai SEZs accounted for 33% of total imports and 68% of total exports compared with 23% of total exports and 68% of total import activities in 2009. Among SEZs, the Jebel Ali SEZ accounted for 71% and 74% of total SEZ imports and exports, followed by Dubai Airport at 16% and 15% of total SEZ imports and exports (Dubai Customs, 2011).

SEZs create quite unique incentives to attract FDI. For instance, while Emirati commercial law mandates that foreign firms may establish subsidiaries in the UAE subject to a requirement of majority Emirati ownership, this type of restrictive requirement doesn't apply to SEZs, where firms may be entirely foreign-owned (Hejmadi, 2004). In addition, all the Dubai SEZs offer relaxed immigration rules, flexible labour regulation, 100 percent tax holiday, and free repatriation of capital and revenue. At the same time, they offer different kinds of licenses, depending on the industrial sector for which the zone has been planned. In this sense, Dubai has been pursuing the SEZ policy with a view to establish industry clusters (Government of the UAE, 2020). These, as has been seen above, significantly enhance the spillover effect of human capital development.

CONCLUSION

A review of the literature on human capital development and SEZs yields several important findings, which can inform empirical research in follow-up studies. First, human capital development has increasingly been acknowledged as an endogenous growth factor that isn't subject to diminishing returns. Moreover, human capital development orients a country's economic trajectory towards the supply of high-quality goods and services, bridging the need for economies of scale with the goal of avoiding a race to the bottom in terms of workers' salaries.

The literature on SEZs yields the finding that these promote human capital development whenever MNEs have an incentive to invest in R&D activities. This incentive depends in part by host country culture and infrastructure, and in part by the configuration of the SEZ scheme. In particular, whenever SEZs aim to facilitate the development of industrial clusters, they then create the conditions for such phenomena as knowledge spillover and specialisation, which in turn have a positive impact on human capital development.

At the same time, a lack of detailed empirical studies on the relationship between human capital development and SEZs constitutes a gap in the literature. This paper suggests future work to fill this gap through empirical work on the experience of establishing SEZs in the Emirate of Dubai. Dubai constitutes an ideal case study. This paper has a limitation to be addressed. Due to a slight disadvantage compared to Abu Dhabi in terms of natural resource endowment, Dubai has been proactive in the diversification of what was originally a simple trading economy. This diversification has taken place through the establishment of SEZs as early as 1985, with the intention of using these to facilitate industry clusters. The highly specific historical and policy conditions of the Emirate of Dubai establish it as a case study of sure interest, and call forth more detailed empirical studies—an invitation that will be taken up in follow-up work to this review—subject to the development of suitably informative indicators.

REFERENCES

- Ali, M. (2021). Imitation or innovation: To what extent do exploitative learning and exploratory learning foster imitation strategy and innovation strategy for sustained competitive advantage?. *Technological Forecasting and Social Change*, 165(5), pp. 120527-120544
- Al-Saleh, Y. (2017). Crystallising the Dubai model of cluster-based development. *Place Branding and Public Diplomacy*, 14(4), 305–317.
- Aggarwal, A. (2007). Impact of special economic zones on employment: Poverty and human development. Working paper, Indian Council for Research on International Economic Relations.
- Aghion, P. and Hewitt, P. (1992). A model of growth through creative destruction, *Econometrica*, 60(2), 323–351.
- Angel, D.P. (1989). The labor-market for engineers in the US semiconductor industry, *Economic Geography*, 65(2), 99–112.
- Arthur, W.B. (1996). Increasing returns and the new world of business, *Harvard Business Review*, 74(4), 100-109.

- Bartlett, W., Krasniqi, B., & Ahmetbašić, J. (2019). Attracting FDI to the Western Balkans: Special Economic Zones and Smart Specialisation Strategies. *Croatian Economic Survey*, 21(2), 5–35.
- Becker, G. (1964). *Human Capital: Theoretical and Empirical Analysis, With Special Reference to Education*, Columbia University Press, New York, NY.
- Bella, G., Mattana, P., & Venturi, B. (2019). Globally Indeterminate Growth Paths in the Lucas Model of Endogenous Growth. *Macroeconomic Dynamics*, 25(3), 693-704.
- Bergman, E. and Feser, E. (1999). Industrial and Regional Clusters: Concepts and Comparative Applications. Working paper, Regional Research Institute, West Virginia.
- Blomstrom, M. and Kokko, A. (1998). Multinational corporations and spillovers. *Journal of Economic Surveys*, 12(3), 247–277.
- Bos, J. W. B., Candelon, B., & Economidou, C. (2016). Does knowledge spill over across borders and technology regimes?. *Journal of Productivity Analysis*, 46(1), 63–82.
- Boshma, R. (2005). Proximity and innovation: A critical assessment. *Regional Studies*, 39(1), 61-74.
- Capello R. and Faggian, A. (2005). Collective learning and relational capital in local innovation processes. *Regional Studies*, 39(1), 75–87.
- Cavallo, A., Ghezzi, A., Colombelli, A., & Casali, G. L. (2020). Agglomeration dynamics of innovative start-ups in Italy beyond the industrial district era. *International Entrepreneurship and Management Journal*, 16(1), 239–262.
- Chatzinikolaou, D., & Vlados, C. (2019). Schumpeter, Neo-Schumpeterianism, and Stra.Tech.Man Evolution of the Firm. *Issues in Economics and Business*, 5(2), 80-102.
- Chu, A. C., & Wang, X. (2022). Effects of R&D Subsidies in a Hybrid Model of Endogenous Growth and Semi-Endogenous Growth. *Macroeconomic Dynamics*, 26(3), 813-832.
- Coleman, J. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94(1), 95–120.
- Crook, T.R., Todd, S.Y., Combs, J.G., Woehr, D.J., Ketchen, D.J. (2011). Does human capital matter? A meta-analysis of the relationship between human capital and firm performance. *Journal of Applied Psychology*, 96(3), 443–456.
- Cunningham, W.V. and Maloney, W.F. (2001). Heterogeneity among Mexico's microenterprises: An application of factor and cluster analysis". *Economic Development and Cultural Change*, 50(1), 131–156.
- Das, G. G., & Drine, I. (2020). Distance from the technology frontier: How could Africa catch-up via socio-institutional factors and human capital? *Technological Forecasting and Social Change*, 150(2), 119755.

Ding, D., Fields, D., Akhtar, S. (1997). An empirical study of human resource management policies and practices in foreign-invested enterprises in China: The case of Shenzhen special economic zone. *The International Journal of Human Resource Management*, 8(5), 595–613.

Doz, Y., Santos, J., and Williamson, P. (2001), *From Global to Metanational*, Harvard Business School Press, Boston, MA.

Dubai Customs (2011), *Dubai Trade Data 2009, 2010*, unpublished dataset.

Dubai Statistics Centre (2011). “Dubai: Foreign Direct Investment per Economic Activity”, available at <http://www.dsc.gov.ae/en/Themes/Pages/AboutTheme.aspx> (accessed 15 June 2020).

Dunning, J., Kumar, N., Lipsey, R., Agarwal, J., Urata, S. (1998), *Globalization, Foreign Direct Investment and Technology Transfers: Impacts on and prospects for developing countries*, Routledge, London.

Economides, A. (2008). Culture-aware collaborative learning. *Multicultural Education & Technology Journal*, 2(4), 243–267.

Engelberg, J., Ozoguz, A., & Wang, S. (2018). Know Thy Neighbor: Industry Clusters, Information Spillovers, and Market Efficiency. *Journal of Financial and Quantitative Analysis*, 53(5), 1937–1961.

Engman, O. and Pinali, E. (2007), “Export processing zones: Past and future role In trade and development OECD trade policy”, working paper no. 53, OECD.

Facility for Investment Climate Advisory Services, Fias (2008). “Special economic zones, performance, lessons learned, and implications for zone development”, World Bank.

Feldman, M.P. and Francis, J.L. (2004). Home grown solutions: Fostering cluster formation”, *Economic Development Quarterly*, 18(2), 127–137.

Franke, R., Hofstede, G., Bond, M. (1991). Cultural roots of economic performance: A research note, *Strategic Management Journal*, 12(S1), 165–173.

Freeman, C. (1987), *Technology Policy and Economic Performance: Lessons from Japan*, Pinter, London.

Freeman, C. and Soete, L. (1997), *The Economic of Industrial Innovation*, Cassell, London.

Frick, S. A., Rodríguez-Pose, A., & Wong, M. D. (2018). Toward Economically Dynamic Special Economic Zones in Emerging Countries. *Economic Geography*, 95(1), 30–64.

Gachino, G. (2006). Foreign direct investment, spillovers and innovation”, unpublished Ph.D. thesis, University of Maastricht.

Giuliani, E. and Bella, M. (2005). The micro-determinants of meso-level learning and innovation: Evidence from a Chilean wine cluster. *Research Policy*, 34(1), 47–68.

Government of Dubai. (2021), “Dubai Strategic Plan 2021”, available at: <https://tec.gov.ae/en/dubai-plan-2021> (accessed 15 Jan 2021).

Government of the UAE (2020), “The Official Website of the United Arab Emirates”, available at: <http://www.uaeinteract.com> (accessed 9 June 2020).

Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology*, 78(6), 1360–1380.

Griliches, Z. (1979). Issues in assessing the contribution of research and development to productivity growth. *The Bell Journal of Economics*, 10(1), 92–116.

Gugler, P. and Brunner, S. (2007). FDI effects on national competitiveness: A cluster approach. *International Advances in Economic Research*, 13(1), 268-284.

Hejmadi, S. (2004), “Bangladesh best practices in public free zones: Dubai technology and media free zone—United Arab Emirates”, available at: <http://www.docstoc.com/docs/22559020/Best-Practices-in-Public-Free-Zones---UAE> (accessed 11 September 2020).

Hofstede, G., (1980). *Culture's Consequences: International Differences in Work-Related Values*, SAGE, Newbury Park, CA.

Hong, E., Lee, I. H. I., & Makino, S. (2019). Outbound Foreign Direct Investment (FDI) Motivation and Domestic Employment by Multinational Enterprises (MNEs). *Journal of International Management*, 25(2), 1-51.

Hoover, E.M. (1970), *An Introduction to Regional Economics*, Alfred A. Knopf, New York, NY.

Hossain Chowdhury, I. (2020). Extended Exogenous Growth Model: Application and Investigation the Long-Term Growth Determinants of Bangladesh. *Asian Economic and Financial Review*, 10(1), 35–53.

Humphrey, J. and Schmitz, H. (1995), “Principles for promoting clusters and networks of SMEs”, discussion paper no. 1, UNIDO, Vienna.

Ibrahim, M. (1994), “The place of the free trade zone in economic development: The example of the United Arab Emirates”, unpublished Ph.D. thesis, University of Durham.

Keeble, D. Lawson, C. Moore, B., Wilkinson, F. (1999). Collective learning processes, networking and ‘institutional thickness’ in the Cambridge region. *Regional Studies*, 33(4), 319–332.

Khodzhaevich, A. K., Davlyatovich, K. S., & Yuldashevich, M. A. (2020). Human Capital Basis of Development of Innovative Economy. *International Journal of Psychosocial Rehabilitation*, 24(4), 3148–3161.

Konstandina, M. S., & Gachino, G. G. (2020). International technology transfer: evidence on foreign direct investment in Albania. *Journal of Economic Studies*, 47(2), 286–306.

Kuwahara, S. (2018). Multiplicity and stagnation under the Romer model with increasing returns of R&D. *Economic Modelling*, 79(1), 86-97.

- Larkin, R. (2020). Knowledge transfer effects of clustering in dual configuration MNEs. *International Journal of Hospitality Management*, 90(5), 102649.
- Lazareva, E. I., & Lozovitskaya, D. S. (2020). Econometric evaluation of the scientific and technical progress parameter in the innovative exogenous economic growth model. *RUDN Journal of Economics*, 28(1), 123–136.
- Lucas, R. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 22(1), pp.3–42.
- Lucas, R. (1990). Why doesn't capital flow from rich to poor countries?. *The American Economic Review*, 80(2), 92–96.
- Lundvall, B.Å. (1992), *National Systems of Innovation; Towards a Theory of Innovation and Interactive Learning*, Pinter, London.
- Madani, D. (1999), “A review of the role and impact of export processing zones”, working paper no. 2238, World Bank Development Research Group.
- Malmberg, A. and Maskell. P. (1999). The competitiveness of firms and regions: ‘Ubiquitification’ and the importance of localized learning. *European Urban and Regional Studies*, 6(1), 9–25.
- Malmberg, A. and Maskell P. (2006). Localized learning revisited. *Growth and Change*, 37(1), 1–18.
- Marshall, A. (1890), *Principles of Economics. An Introductory Volume*, Macmillan, London.
- Matly, M. and Dillon, L. (2007), “Dubai strategy: Past, present, future”, working paper, Harvard Business School, available at: http://belfercenter.ksg.harvard.edu/files/matly_paper1.pdf (accessed 25 July 2020).
- Mattsson, H. (2007), *Locating Biotech Innovation: Places, Flows and Unruly Processes*, Geografiska regionstudier, Uppsala.
- McKelvey, M., & Saemundsson, R. J. (2018). An evolutionary model of innovation policy: conceptualizing the growth of knowledge in innovation policy as an evolution of policy alternatives. *Industrial and Corporate Change*, 27(5), 851-865
- Mincer, J. (1974), *Schooling, Experience and Earnings*, Columbia University Press, New York, NY.
- Morgan, K. (1997). The learning region: Institutions, innovation and regional renewal. *Regional Studies*, 31(5), 491–503.
- Nauwelaers, C. and Wintjes, R. (2002). Innovating SMEs and regions: The need for policy intelligence and interactive policies. *Technology Analysis & Strategic Management*, 14(2), 201–215.
- Nelson, R. (1993), *National Innovation Systems: A Comparative Analysis*, Oxford University Press, Oxford.

- Nelson, R. and Phelps, E. (1966). Investment in humans, technological diffusion and economic growth. *American Economic Review*, 61(1), 69–75.
- Nelson, R.R., and Winter, S.G. (1985). *An Evolutionary Theory of Economic Change*, Harvard University Press, Cambridge, MA.
- North, D. (2005), *Understanding the Process of Economic Change*, Princeton University Press, Princeton, PA.
- Otsuka, K., & Sonobe, T. (2018). The Role of Human Capital in Cluster-Based Industrial Development. *The Developing Economies*, 56(2), 104–116.
- Patibandla, M. and Petersen, B. (2002). Role of transnational corporations in the evolution of a high-tech industry: The case of India's software industry. *World Development*, 30(9), 1561–1577.
- Pinch, S. and Henry, N. (1999). Paul Krugman's geographical economics, industrial clustering and the British motor sport industry. *Regional Studies*, 33(9), 815–827.
- Piore, M.J. and Sabel, C.F. (1984), *The Second Industrial Divide: Possibilities for Prosperity*, Basic Books, New York, NY.
- Pisano, G. (1990). The R&D boundaries of the firm: An empirical analysis. *Administrative Science Quarterly*. 35(1), 153-176.
- Porter, M. (1990), *The Competitive Advantage of Nations*, The Free Press, New York, NY.
- Porter, M. (1998). Clusters and the new economics of competition. *Harvard Business Review*, 76(6), 77–90.
- Porter, M. (2000). Location, competition, and economic development: Local clusters in a global economy. *Economic Development Quarterly*, 14(1), 15–34.
- Porter, M. (2003). Building a competitive UAE economy: The new learning. Available at: http://www.isc.hbs.edu/pdf/caon_uae_2003.05.07_v2.pdf (accessed 15 Jan 2020).
- Qiu, S., Liu, X., & Gao, T. (2017). Do emerging countries prefer local knowledge or distant knowledge? Spillover effect of university collaborations on local firms. *Research Policy*, 46(7), 1299–1311.
- Romer, P.M. (1986). Increasing returns and long-run growth. *Journal of Political Economy*, 94(5), 1002-1037.
- Romer, P.M. (1987). Growth based on increasing returns due to specialization. *American Economic Review*, 77(2), 56–62.
- Romer, P.M. (1990). Endogenous technological change. *Journal of Political Economy*, 98(5), S71-S102.
- Romer, P.M. (1994). The origin of endogenous growth. *Journal of Economic Perspectives*, 8(1), 3–22.

- Sachs, J. and Warner, A. (1999). The big push, natural resource booms and growth. *Journal of Development Economics*, 59(1), 43–76.
- Sachs, J. and Warner, A. (2001). Natural resources and economic development: The curse of natural resources. *European Economic Review*, 45(4/6), 827–838.
- Sakamoto, T. (2018). Four worlds of productivity growth: A comparative analysis of human capital investment policy and productivity growth outcomes. *International Political Science Review*, 39(4), 531–550.
- Saxenian, A.L. (1991). The origins and dynamics of production networks in Silicon Valley. *Research Policy*, 20(5), 423–37.
- Schmitz, H. (1997). Collective efficiency and increasing returns. *Cambridge Journal of Economics*, 23(4), 465–483.
- Sengupta, J. (2011), *Understanding Economic Growth: Modern Theory and Experience*, Springer, New York, NY.
- Shahbaz, M., Destek, M. A., Okumus, I., & Sinha, A. (2019). An empirical note on comparison between resource abundance and resource dependence in resource abundant countries. *Resources Policy*, 60(1), 47–55.
- Smith, A. (1910), *An Inquiry into the Nature and Causes of the Wealth of Nations*, Everyman edition, J.M. Dent, London.
- Solow, R. (1957). Technical progress and the aggregate production function. *Review of Economics and Statistics*, 39(3), 312–320.
- Song, Y., Deng, R., Liu, R., & Peng, Q. (2020). Effects of Special Economic Zones on FDI in Emerging Economies: Does Institutional Quality Matter? *Sustainability*, 12(20), 1-21.
- Sredojević, D., Cvetanović, S., & Bošković, G. (2016). Technological Changes in Economic Growth Theory: Neoclassical, Endogenous, and Evolutionary-Institutional Approach. *Economic Themes*, 54(2), 177–194.
- Storper, M. (1995). The resurgence of regional economies, ten years later: The region as a nexus of untraded interdependencies. *European Urban and Regional Studies*, 2(3), 191–221.
- Storper, M. (1999). *The Regional World: Territorial Development in a Global Economy*, The Guilford Press, New York, NY.
- Storper, M. and Venables, A. (2003). Buzz: Face-to-face contact and the urban economy. CEP discussion papers no. dp0598, London School of Economics.
- Swan, T.W. (1956). Economic growth and capital accumulation. *Economic Record*, 32(2), 334–361.
- Turgel, I. D., Bozhko, L. G., & Zinovyeva, E. G. (2019). Cluster approach to organization of special economic zones in Russia and Kazakhstan. *R-Economy*, 1(2), 71.

Un, C.A. and Cuervo-Cazurra, A. (2008). Do subsidiaries of foreign MNEs invest more in R&D than domestic firms?. *Research Policy*, 37(10), 1812-1828.

Von Hippel, E. (1988), *The Sources of Innovation*, Cambridge University Press, Cambridge.

Warr, P. (1989). Export processing zones: The economics of enclave manufacturing. *The World Bank Research Observer*, 4(1), 65–88.

Weber, A. (1909), *Theory of the Location of Industries*, University of Chicago Press, Chicago, IL.

Wu, W. (2020). *Pioneering Economic Reform in China's Special Economic Zones: The Promotion of Foreign Investment and Technology Transfer in Shenzhen (Routledge Revivals)* (1st ed.). Routledge.

Zhang, K. and Markusen, J. (1999). Vertical multinationals and host-country characteristics. *Journal of Development Economics*, 59(2), 233–252.