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An Overview of the Influence of Government Support on Chilean Firm Internationalization

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Abstract

This paper explores how, and with what outcomes, the Chilean government supports the internationalization of its multinational enterprises both domestically and abroad. Beginning with a brief review of the evolution of internationalization from developed market firms to emerging market multinational enterprises [EMNEs], the authors then explore the reasons behind Chilean firm internationalization, the role of government, and additional factors occurring in the Chilean home market. Through government initiatives and firm-level support of trade and economic development since the turn of the century; Chile has strengthened its financial indicators, increased involvement in various foreign direct investment [FDI] networks, and has increased internationalizations of Chilean firms. The authors' support through trade agreement participation, exporting initiatives such as ProChile and Chilean SOFOFA, and high levels of entrepreneurship and innovation.

Introduction

Firm internationalization has long existed, however, the modern internationalization phenomenon started in the early 20th century concurrent with the rise of capitalism. Early studies of internationalization focused on firms based in countries with strong economies. Those developed country multinational enterprises [DMNEs] have also been referred to as multinational corporations and transnational enterprises (Tan, 2017; Zhang, 2014). Many theories, such as the eclectic paradigm theory, product life cycle theory, and monopolistic advantage theory (Dunning, 1979; Vernon, 1966; Hymer, 1976) have provided a strong foundation for explaining the presence of DMNEs. However, the concept of internationalization has begun to evolve. Contemporarily, EMNEs are increasing their presence and significance in the global marketplace.

Since the 1960s, many emerging countries began to offer location advantages to foreign firms while their domestic firms began engaging in outward FDI activities. These countries have transitioned from focusing on inward-oriented import substitution policies toward outward-oriented policies aimed at achieving export led growth. While emerging markets often offer location advantages such as cheaper production and supply chain costs, EMNEs are motivated to internationalize to embrace their agility in adapting to rapidly changing environments and to capitalize on their small-scale technical advantages (IMF, 2003)

Firms from emerging markets, mainly China, have made substantial headway in international expansion. Between 2010 and 2019, the number of firms from the E20 countries rose from 17% to 33%, respectively. The E20 countries account for approximately 47% of world GDP, based on purchasing power parity, and comprise 56% of the world population. When considering the 20 largest investors around the world, the E20 has made more than 20% of the total investments which is less than the approximately 53% represented by developed countries. Data shows that EMNEs have become an important part of global investment among those investors (Casanova & Miroux, 2020). China, as one of the largest investors among the E20, has successfully listed approximately 124 firms on the Fortune

Global 500 list, surpassing the US, which lists 121 firms (Murray & Meyer, 2020). EMNEs have achieved leadership positions in many industries including among others, automobiles, logistics, telecoms, mining productions, and logistics (Casanova & Miroux, 2018).

Theoretically, some scholars (Dunning, 1979; Rugman, 2010) argued that EMNEs share same theories as DMNEs when explaining the process of firm internationalization. However, there are still arguments regarding theoretical differences of EMNEs due to the new global marketing circumstances (Tan, 2017). From Dunning's view on MNEs, enterprises with firms' specific advantages [FSAs] that invest overseas are more likely to hold monopolistic advantages to offset the challenges faced in foreign countries. FSAs include skilled workforce, knowledge, managing expertise, technology, etc. Emerging market firms captured many FSAs including a skilled workforce and agility of adapting to the changes; however, the lack of production technology and managerial knowledge became the reasons that such theory might not explain the internationalization of EMNEs (Rugman, 2010) Production technology mainly focuses on firms' research and development (R&D) intensity and expenditure to total sale within a year. However, excluding China and India, many EMNEs have insufficiently engaged different stages of R&D intensity in the internationalization process (Tan, 2017). Therefore, Dunning's FSA has failed to support the belief that EMNEs hold monopolistic advantages.

Rugman (2010) indicated that EMNEs holds country specific advantages [CSA] instead of FSA. EMNEs' internationalization depends on natural resources, low labor cost, trade agreements, and economies of scales (Tan, 2017). Due to the complexity of EMNEs' globalization process, it can be possible that EMNEs develop FSAs based upon economic integration. However, the limited resources and lack of knowledge and system integration will take longer time for EMNEs to develop all these skills (Rugman, 2010).

Throughout the years, EMNEs developed different approaches to international market expansion with their different advantages. Matthew's (2006, 2017), linkage, leverage, learning [LLL] framework has provided explanation of EMNEs rapid development in the global market. The characteristics of EMNEs have led the firms to utilize different internationalization patterns. These firms tend to exploit uniqueness and differences rather than similarities in their global expansion endeavors. This has helped firms from emerging market build ownership advantages that are different from DMNEs (Tan, 2017).

International Business Climate in Chile

Before assessing the internationalization of Chilean firms, it is important to look at the international business climate within their home market. Throughout its history, Chile's FDI policy has been tumultuous with expropriations in the 19th Century and nationalization of its key resource in the 20th Century, to the beginning of a more open environment under the Pinochet administration (Salcedo & Akoorie, 2013). Salvador Allende (1970–1973) nationalized a large number of firms between 1970 and 1973 but was overthrown by his General Chief of Staff, Augusto Pinochet, who rose to power in 1973 through a successful coup. Pinochet began to open up the Chilean economy through the recommendations of the free-market-oriented "Chicago Boys" who studied economics under Milton Friedman at the University of Chicago.

Contemporarily, Chile has been the shining star of Latin America due to a strong business climate inaugurated by their stable economic environment and rich natural resources. Chile has received international recognition as a leading wine exporter due to its excellent environmental and sanitary conditions (Casanova et.al, 2008). Chile's prolonged economic growth in the last two decades has facilitated an attractive investment climate for the country. Since the country opened its services sector in the world trade organization [WTO], through the General Agreement on Trade in Services [GATS] in 1995, Chile's FDI performance has accelerated with an average increase of 3% in both inward and outward FDI (World Bank, 2019). Free trade agreements established with developed markets such as EU and US in 2014 have aided the expansion of domestic firms. Additionally, privatization of state-owned enterprises not only created more macroeconomic stability but also contributed to the strength of Chile's business climate. Such transition has increased companies' efficiency, flexibility, and innovation, while

enabling the competitive advantages of firms in industries such as energy, transportation, and agriculture to look abroad for expansion opportunities (Ludena, 2011).

Multilatinas

The internationalization of firms in Latin America countries is not a new phenomenon, as many firms originating in Argentina, Mexico, Chile, and Peru have adopted location-decision strategies to operate in neighboring countries (Juanita, Juliana, & Indira, 2012). Like other emerging countries, Latin America benefitted from period of relative political stability that enabled the region to increase its economic growth in early 2000, mainly by exporting commodities (Aguilera, et. al, 2017). In a very short period of time, Latin America increased its economic power, with the potential to become a major player in the global arena. The successful global leadership position of Latin American MNEs in the 1990s have established a new term “multilatina”, initially referred to as firms who leverage their position in domestic markets to expand operations throughout Latin America (Casanova et.al, 2008). However, some multilatinas altered their strategy significantly by pursuing more aggressive expansion strategies, not only regionally but throughout the globe resulting in a significant growth in outward FDI from \$-345 million in 1990 to \$97 billion in 2019 (Word Bank, 2019) The accelerated development has proved that multilatinas are active in the internationalization process not only within the region, but also all around the world.

Internationalization of Chilean firms

Similar to many Latin American EMNEs, Chilean firm internationalization often began within the region. The outward expansion of Chilean firms in the transportation, retail, agriculture, and food industries initiated in neighboring countries due to similarities in language, culture, and customer base. With the rapid development of logistics, Chilean MNEs have taken further steps to expand to other emerging markets as well as developed markets through alliances, joint ventures (JV), and merger and acquisitions (M&A). Mexico and Brazil have the largest number of firms engaged in outward FDI over the past two decades (World Bank, 2019). Chile has been ranked the third-largest source of outward FDI in Latin America, which is ahead of countries with larger economies and populations, such as Colombia and Argentina (UNCTAD, 2020; Aguilera, 2017).

Although Chile is considered a small country in comparison to Mexico, Brazil, Argentina, and Colombia, Chilean MNEs have reached a level that competes with the top companies from these countries. Chile has been ranked 7th in LATAM based on their number of leading multinational companies (Pasquali, 2020). In considering the leading retailers of Latin America, Chilean multi-brand chains, Cencosud and Falabella have ranked first and third place, respectively; in generating the highest sales among Latin American retailers in 2018 (Mendoza, 2020). This has highlighted the importance of Chilean firms in the international marketplace.

Chile has successfully encouraged inward FDI through participation in numerous free trade agreements (FTAs) with major commercial partners such as the US and EU (USTR, 2015; Chile, 2019). The agreements have provided Chilean firms many opportunities to adopt new technology and skills. As Matthews (2017) noted in the LLL framework, linking with overseas business partners provides an opportunity to develop different capabilities. Many Chilean firms seem to have demonstrated the LLL framework through their ability to leverage relationships with different partners and learn different knowledge resources that other firms have and utilized them to increase profitability and improve operations in the home market.

Government Support

Deregulation and liberalization in Latin American countries from the 1990s onward have played a major role in Chile’s internationalization. It has eliminated restriction and increased the competitiveness

of the firms. It also enabled firms to move forward to international markets to gain more competitive advantages and expand their market presence. Despite its relatively small size, the country attracted many foreign investors. The country's market-oriented policies have also generated significant opportunities for foreign investors to be involved in Chile's economic growth. Due to the government's support and attractive foreign investment climate, Chile has signed over 60 free trade agreements, which has increased the reputation of the country in international market.

It is especially notable that government has played a significant role in Chilean firm internationalization. Today, Chile has become a close partner not only with neighbor countries, but also other emerging and developed markets. Chile has ranked as the 29th largest goods trading partner with US, where the country holds \$2.9 billion worth of US stocks. Among the least corrupt countries in Latin America, Chile has ranked 24 out of 176 countries globally primarily due to supportive governmental policies (State, 2018)

The Chilean government supports the internationalization of its multinational enterprises both domestically and abroad in a variety of ways. In building their macroeconomic framework, Chile has become a leader within the region however improvements are needed in corporate governance (OECD, 2011). Additionally, looming social unrest threatens the country's current business climate. In analyzing the Chilean business environment after the implementation of trade liberalization, there are a few factors that emerge which seem to provide assistance to Chilean firm internationalization. In the home market, Chile has built strong institutions while instituting policies that are favorable to business operations. The country encourages foreign direct investment and innovation. Lastly, the presence of business groups permeates business operations in both foreign and domestic firms.

The presence of strong institutions

The Chilean government has worked to improve the institutions that exist in Chile. This is particularly evident in the financial services industry. Chile's open economy has encouraged FDI from foreign banks, which has improved the competitiveness of the industry. Du, Serrano, and Vianna (2018) collected the financial statement data of foreign banks operating in Chile from 2005 to 2014, finding that "foreign banks improve banking sector competitiveness, reduce the volatility of returns, and increase commercial and consumption loans."

Policies favorable to business operations

While strong institutions are important to the health of the economy and to encourage FDI, the Chilean government has implemented policies favorable to business operations such as reducing tariffs by entering into free trade agreements and encouraging foreign direct investment. As countries engage in free trade agreements, they are often required to reduce or eliminate tariffs between member countries. Linarello (2018) analyzed direct foreign tariffs and indirect tariffs (on intermediate goods) paid by Chilean firms and found "that tariff cuts induce firms to acquire new machinery and pay higher wages to skilled workers." These findings benefit both the firm and its employees and, in this sense, the decision to enter into free trade agreements is favorable to business operations.

Beyond engaging in free trade agreements, Chile also encourages FDI as a means of improving its economy. Salcedo and Akoorie (2013) find that Chile's policies towards foreign direct investment have led to the country upgrading its economic infrastructure. Du et al. (2018) stated that "...Chile has been very open towards foreign capital and multinational corporations receive the same treatment as domestic companies." Despite Chile's generally healthy economic indicators, the region is susceptible to economic volatility. FDI can be stabilizing to a country in the aftermath of an economic downturn. Alvarez and Gorg (2012) found that "multinationals are more likely to exit contributing to the employment contraction during the crisis, but surviving foreign firms experience lower employment reductions than domestic enterprises." The presence of DMNEs has arguably improved the country's economy.

Climate of innovation

The FDI policies in Chile have helped promote a climate of innovation. Interestingly, while strong intellectual property rights [IPR] within a country typically encourage foreign direct investment, Chile presents a unique case. Penarrieta and Canavire-Bacarreza (2019) found that strong IPR in Chile led to decreased FDI between 2001-2007. One possible explanation for the decreased FDI despite strong IPR during this period is the increase in imitability capabilities by Chilean firms, as was noted by Branstetter, Fisman, Foley, and Saggi (2007).

The mining industry is a significant part of Chile's economy and the industry experiences innovation throughout the supply chain. Stubrin (2017) analyzed Knowledge Intensive Mining Suppliers in Chile and found that some of these firms utilized new technologies as a platform to develop unique solutions to unresolved problems in the mining industry. These innovations resulted in patents, local and international awards (Stubrin, 2017), which are supported by Chile's strong IPR.

Presence of business groups

While not initiated by the government, business groups are present in Chile and have fostered a connection between the government's business policies and its firms. Both foreign and domestic firms interact with business groups. Between 1970 and 1990 the percentage of publicly traded firms in Chile that were affiliated with a business group rose from 20% to 70% (Salvaj and Couyoumdjian, 2016; Aldunate, Gonzalez, Prem, & Urzua, 2020). Contemporarily, Khanna and Yafeh (2007) noted that while business groups can develop as a result of institutional voids, they also could result from government policies.

The findings of Aldunate et al. (2020) demonstrated that the increase in business groups between 1970 and 1990 is a result of Pinochet's privatization and currently forms the predominant organizational structure in Chile. In their study that explored the creation of business groups in the wake of privatization reform implemented during the Pinochet regime, Aldunate et al. (2020) found that firms sold during this period became part of new business groups and debilitated traditional elites within Chile.

Bucheli, Salvaj, and Kim (2019) examined business groups that existed in Chile after the country's transition to a more pro-market regime and found that firms maintained their business groups post-transition to sustain their market power. In their examination of MNC strategies in Chile, Bucheli and Salvaj (2018) found that when foreign MNCs forming relationships with the host country's elite will serve to legitimize these foreign firms if the country's society perceives the relationships to be legitimate. Clearly, the presence of business groups has impacted business operations of both domestic and foreign firms operating in Chile.

Government Objectives of Chilean OFDI

Chile's economic growth is mainly led by its exports, which amount to approximately 59% of their GDP (OECD, 2020). Fuels, mining, and agri-food have been the country's most traded products. The Chilean government has been actively supporting the country's international trade and has expanded its trade agreements not only with neighboring countries but also to over 65 economies around the world (OECD, 2020). Despite such success, the Chilean government has set multiple objectives, hoping to be achieved by supporting the internationalization of their firms including helping firms distinguish their exports from the rest of the world.

The Chilean government has been encouraging the country's outward FDI and has integrated different mission objectives to support the country's international engagement (Chile, 2018). Chile, as one of the least corrupt countries in South America, has become one of the top strategic alliance partners of the US. It is estimated that the total exports from Chile to the US has reached \$13 billion in 2019. To strengthen the relationship with US and increase exports, the country has set a mission objective to expand US-Chile trade investment, social inclusion, and prosperity. Chile has promoted business interested through engagement, supported regulatory process, and facilitated two-way trade flows. Along

with that, Chile opened its market to the firms in US once again in order to promote trade facilitation, entrepreneurship and small and medium business development (Chile, 2018).

In addition to being a close partner with the US, Chile's government has also enhanced cooperation on innovation, technology, and sustainable management with commercial partners such as the EU, Mexico, Brazil, Argentina, and Japan, among others (Chile, 2018). Furthermore, the Chilean government has set a management objective to provide the highest quality services to all regional and overseas business partners, while maintaining safe working conditions that encourage productivity and increased morale (Chile, 2018)

The Chilean government has been actively supporting the country's engagement with overseas countries. The government encourages inward FDI in order to promote linkage with foreign firms, leveraging their relationships, and acquiring new business skills and knowledge. However, the Chilean government also encourages outward FDI through initiatives such as ProChile and SOFOFA to be a part of major global trade partnerships (OECD, 2021).

Pro-Chile

Chile has regularly ranked number one in easiness of doing business compared to neighboring countries in Latin America due to its early action in trade policies. Since the early 1990s, Chile's government has decided to implement active trade policies by encouraging small and medium enterprises (SMEs) to develop activities in order to enter the international market. Such activities mainly focused on promoting goods, such as, mining, wine, farming, and manufacturing products (Perez, et al., 2017).

Many Latin American countries started their international trade with neighboring countries in the early 1990s. Chile, on the other hand entered internationalization much earlier with the establishment of ProChile in 1970s ProChile is the Chilean Government's export promotion bureau originally established in 1974 to diversify exports from Chile to rest of the world. The company facilitates contacts between Chile's exportable goods and services and importers through Chilean export companies from various industries. During that era, Chile's economy mainly relied on exports in commodities. However, today, the company has connected more than 60 trading partners around the world, which represents approximately 86% of global GDP (ProChile, 2020). Chile's position in Latin America grew throughout the years, and with that enticed governments' attention on opening the market to the world in order to increase the economic growth ProChile not only focused its business area but also created National Export Development Council along with the Federation of Chilean Industry SOFOFA in order to increase Chilean exports, especially from small and medium enterprises in 2014. The goal of establishing the council is to provide collaboration between trade associations and export related agencies to boost the growth of small and medium enterprises, which currently accounts for 2% of Chile's total exports (WTO, 2015).

Growing the middle class

As Chilean firms expand their international presence, the country's economic growth has significantly increased. The country's GDP per capita has risen from \$5,074 in 2000 to \$14,896 in 2019 (World Bank, 2019). Throughout the last decade, Chile's GDP per capita has been steadily increasing more than 3% annually. With their stable macro-economic environment, Chile ranks as the 33rd most competitive economy in Latin America (Schwab, 2019).

Chile's strong import and export trends have brought many knowledge exchange opportunities for its population. Today, the country is characterized as one of the top entrepreneurial countries in Latin America with approximately 25% population involved with entrepreneurial activities (Baier, Hormiga, Amoros, & Urbano, 2018). Since 2000, Chile's GINI index (a measurement of middle-class households within a country) has increased approximately 8%, whereas Brazil's GINI index increased 5% and Mexico's GINI index increased 7% over the same time period (World Bank, 2017). These improvements have solved poverty problems created by income disparity, reducing poverty by 28% since 2000 (World Bank 2017).

Social unrest and potential for future political risk

Chile's political and economic institutions have progressed through three different stages since 1989. The country has transitioned from a democracy between 1989 and 2012, to a commodity cycle in 2013, followed by a post transition era between 2014-2017 (Soza, 2018) The twenty-five-year political cycle has brought about more economic stability for the country yet has not completely met the expectation of the Chilean citizens. During the political transition, Chile has mainly focused on its macroeconomic growth; however shifting the focus on the macroeconomy has become a challenge for the country. For instance, the educational system has not been improved during the transition period, which has resulted in lower educational performance (Soza, 2016). Additionally, Chile remains one of the most unequal countries in Latin America with an income gap of 65% (Laing, Sherwood and Gambero, 2019). Therefore, it is anticipated that neglected areas might negatively impact the country's economy.

Conclusion

Chile's international business climate has seen great improvement since the country began participating in free-trade agreements with the developed market such as EU and the US. Their economic indicators further improved when the country became a member of the Organization for Economic Co-operation and Development As a growing emerging market, Chile continues to offer many business and investment opportunities for foreign investors. Chile took one of the highest positions in the "easiness of doing business" rank compared to other countries in Latin America (Stefenson, 2020). Since the early 1970s, Chilean government has supported firms in their internationalization through export assistance programs such as ProChile and SOFOFA. Today, Chile is ranked as the 41st strongest economy in the world in terms of GDP and such success is inseparable from the government's support in promoting trade agreements, export initiatives, and having a high level of self-motivated entrepreneurs. As such, we predict that if the stable economic conditions continue in Chile and other Latin American countries, there is a huge potential that Chilean government will actively encourage firms' internationalization and companies will continue their further expansion in international markets.

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USA and China: A Tug of War

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Abstract

The purpose of this research is to explain the tug of war between China and the United States, particularly in regard to technology. China and the United States have become deeply interdependent in economic terms since China's market-oriented reforms in 1978. This has included high technology. But in recent years China's leadership has sought to strongly advance its high technology and decouple it from U.S. interdependence. The U.S. has responded similarly. Under President Trump, the U.S. started a trade war with China. At issue was U.S. reliance on China for national security reasons. Trump sought less reliance on China. Biden to date has not changed U.S. policy. There are multiple reasons for this reality. This occurs within a specific political and economic historic context. The authors seek to explore the specifics of the tug of war over technology as well as the multi-levels of the continually evolving context. The methodology for this effort is twofold; wherever possible the authors use contemporary public documents and historical analysis. In terms of historical context, the authors also use data based on approximately 350 confidential interviews conducted on-site in China between 1988 and 2018.

Keywords: China Technology, China innovation, trade, U.S. technology, Biden, Trump, Xi Jinping

Introduction

The economic relationship between China and the U.S. is the most important economic relationship in the world. The two countries are locked into substantial interdependence. China buys and holds trillions of U.S. debt. U.S. companies of all kinds including many high-tech companies like Apple have huge manufacturing interests in China. But the relationship is not cooperatively interdependent but competitive in economic and political terms. China is a rising power. For years, the leadership of both countries seeks to avoid outright conflict over major issues like Taiwan (on-site interviews). The tug of war between the two countries plays out particularly in regard to high technology. Both countries jealously guard their prerogatives and autonomy regarding technological innovation. The leadership of both countries seeks to lead and avoid dependence on the other. This has widespread implications domestically and internationally. The implications are discussed below in the section on context.

Leadership in both countries has narrowed strategic vision. In the case of the U.S. it began with the Trump administration. U.S. presidents have historically supported the rules-based multi-lateral trading system under the WTO. In 2018 President Trump initiated a trade war with China by imposing tariffs on a variety of Chinese goods. As an avowed nationalist he viewed trade through the lens of national security. To date President Biden has not changed this view. The Chinese leadership under Xi Jinping is increasingly protecting certain sectors in a tightly controlled market. China subsidizes its favored companies. It has always protected certain sectors from foreign investors as well as requiring foreign firms to hand over intellectual property in return for market access (on-site interviews). Thus, from a broad perspective the U.S. and China are hugely interdependent. It is impossible for the U.S. and China to entirely decouple even in the technology sector (on-site interviews). Even so, the tug of war will increase.

Methodology

The methodology for this research is twofold. First, wherever possible, the authors have used contemporary public documents, books, and articles for evidence. Second for historical context, the authors have used public documents, books, and articles, but also approximately 350 interviews with key influencers in Shanghai, Beijing, Hong Kong Singapore and Washington, DC between 1988 and the summer of 2018. It is important to note that many of the professionals who are still working in China wish to have their comments kept confidential. We choose to respect their request (particularly in light of President Xi's hardline).

Historical Context

The tug of war between the USA and China particularly in regard to high technology occurs within a complicated context of interdependence. The two largest economies in the world are locked in an interconnected relationship of competition and cooperation. But particularly in the area of technology each leadership seeks to strengthen its independence from the other and advance its competitive advantage. It is classic protectionism but in the new era of technological innovation.

Moreover, this sector innovation takes place in a particularly competitive arena instigated and perpetuated by both sides. Each side has its problems. China has slowing growth probably 4.3% down from 4.8% and severe Covid-19 lockdowns (Elizabeth Economy on China's growth rate, Fareed Zakaria interview, GPS, Jan. 10, 2022).

Policy is always important in China under Xi Jinping, politics Trumps economics. China initiated decoupling well before the trade war began. A "Tech War" between the two countries has emerged including China's long-standing drive to advance artificial intelligence and 5G (on-site interviews). For years the Chinese president has developed economic policy to reduce China's reliance on the U.S. China's expansionist policies in the South China Sea, separate trading arrangements with the countries in Southeast Asia, its own development bank, the "Belt and Road" initiative to advance Chinese influence, the "Made in China 2025" campaign, all aim to propel China to the forefront and advance a separate trading system from the U.S. (Geib and Pfaff, 2018). According to the China scholar Elizabeth Economy, the Chinese leadership has alienated many potential allies with its aggressive expansionist policies in terms of politics and economics. This includes the "Belt and Road" initiatives as well as interventions in the South China Sea and "bi-lateral" economic treaties with Southeast Asian nations.

China scholar Elizabeth Economy states, "Chinese officials and scholars appear assured that the rest of the world is onboard with Xi's vision, as they trumpet, 'The East is rising and the West is declining' yet many countries increasingly seem less enamored of Xi's bold initiatives, as the full political and economic costs of embracing the Chinese model become clear" (Elizabeth Economy, Xi Jinping's "New World Order," Foreign Affairs, Jan/Feb '22, p. 54). Xi's success would seem in great part whether he could adjust to the "blowback" (Ibid).

There is at least one more important historical dimension. Xi Jinping has long been conducting a crackdown. It began as a supposed campaign against "corruption" but morphed into a campaign against political opponents (on-site interviews). Elizabeth Economy argues the following: "In recent months, Xi has alarmed global leaders by cracking down on China's world-class technology sector, eradicating the last vestiges of democracy in Hong Kong, and flexing China's military muscles..." (Elizabeth Economy, "Xi Jinping's New World Order," Foreign Affairs, p.67).

Another China scholar supports the view of Elizabeth Economy. Daniel Rosen states the following: "The pattern of macroeconomic policy in the Xi era is clear: each attempt at reform has produced a miniature crisis that has threatened to become a bigger one, prompting the CCP to revert to what it knows best – command and control." (Daniel Rosen, "China's Economic Reckoning" Foreign Affairs, July/August 2021, p. 23). Rosen goes on to explain that the real story about the so-called reform effort is that despite claims to the contrary "Xi has tried but largely failed to push ahead with the (reform) agenda that Deng launched in 1978 and that Xi's predecessors all sustained." (Ibid)

U.S. Response

The U.S. response to China's protectionist decoupling efforts was to start a trade war. The U.S. started the trade war in 2018 by imposing 25 percent tariffs on \$34 billion of Chinese exports. Beijing retaliated with levies on an equal amount of American goods. On July 10, 2018 the U.S. threatened tariffs on an additional \$16 billion of imports from China. As of October 2018, the U.S. had imposed tariffs on \$250 billion in Chinese imports (Orlik, 2018). After the escalation of the trade war, a trade deal was reached in January 2020. Biden has not substantially changed the situation. This rivalry creates tensions across the relationship. It particularly impacts the tug of war over technology.

China's High-Tech Focus

China is unique in the breadth of its industrial policy. For years the government concentrated on modernizing traditional industries such as shipbuilding and petrochemical production. In 2010 seven new strategic industries, from alternative energy to biotechnology, became targets. In 2015, China revealed its latest policy, a program called "Made in China 2025." The initiative specifies ten sectors that will be at the heart of the plan. Highlighted are sectors such as new-energy vehicles, high-tech ship components, new and renewable-energy equipment, high performance medical devices, industrial robots, large tractors and harvesters, mobile-phone chips, and wide-body aircraft (*The Economist*, 2017).

"Made in China 2025" is part of the Xi government's drive to develop or acquire its own technology and promote its own companies to rival the West's. Singled out are industries of the future ranging from robotics, electric cars, to Artificial Intelligence (AI). President Xi told the Party Congress that "China will support state capital in becoming stronger, doing better, and growing bigger, turn Chinese enterprises into world-class, globally competitive firms (Lindblad, 2017)." The program directs cities and companies to shift out of low-cost, labor-intensive manufacturing and into higher value-added production. State planners want companies to become globally competitive not only in established industries such as autos, but also dominate in new areas such as drones and AI (Roberts, 2017). The new industrial policy set forth is aimed at raising productivity in every part of the Chinese economy. The policy is geared toward every part of production, including improving the quality of human talent, how capital is used, and how technology is developed (Roberts, 2017).

The implementation of Beijing's blueprint and delivering on the goals falls largely to provinces and cities across the country. Cities like Guangzhou and Shenzhen with their important manufacturing base will play important roles in carrying out the plan. The effort also includes state-owned enterprises (SOEs). President Xi wants state-owned companies to become bigger and stronger. To upgrade SOEs, one suggestion is to enter into ventures with private companies, so they can tap into their technical know-how (Roberts, 2017), not unlike the long-standing official Chinese policy to seek transfer of foreign technology, to establish domestic companies and eventually displace foreign competitors.

Problems in the Telecommunications Industry

It is worthwhile to look at the fall-out from the Trump administration's battle with Huawei Technologies Co. It affects not only the Chinese company, but also impacts U.S. companies negatively. Colorado based Viaero Wireless' mobile network serves rural stretches of four states. The regulatory order from Washington required the company to replace key pieces of its system that had been supplied by Huawei Technologies Co. According to Viaero, the equipment swap, at a cost of more than \$400 million, threatens its survival and will force it to buy pricier gear (Sebenius, 2020).

Viaero is among 60 or more telecom operators swept up in a directive by the Federal Communications Commission to remove components produced by Huawei, which the U.S. government alleges could be spying on behalf of Beijing. These smaller carriers have turned to Huawei's low-cost reliable products to help them roll out networks in underserved regions. That became a problem after the Trump administration launched a global campaign to persuade U.S. allies to block Huawei from their 5G mobile networks (Sebenius, 2020).

And it is not surprising to find Huawei Technologies Co. involved in the latest “Belt and Road” project pushed by the Chinese government. The Belt and Road infrastructure program is part of Beijing’s attempt to increase Chinese influence abroad. The infrastructure projects can be found throughout Asia and Africa. But the newest enterprise reaches as far as Europe. In this new venture, China has its sights on greater involvement in the worldwide Internet. By building a cable reaching from China to France, it will greatly expand Chinese capabilities.

In the new venture, China will build a cable, known as Peace, all the way from China to France. The cable will travel overland from China to Pakistan. From Pakistan it will run under water along about 7,500 miles of ocean floor around the horn of Africa before reaching France (Fouquet, 2021).

Hengtong Optic Electric Co. is the corporation building the cable. One of Hengtong’s largest shareholders happens to be Huawei Technologies, the Huawei at the center of the disagreement between the U.S. and China. And Huawei is not only a shareholder but is also making equipment for the Peace cable. Because of the U.S. led boycott of many Chinese telecommunications equipment makers, including Huawei, for national security reasons, the question arises: will U.S. and European corporations yield to U.S. pressure and avoid use of the cable? The U.S. has urged the international community to make sure that the undersea cables connecting the U.S. to the global Internet are not subverted for intelligence gathering by China (Fouquet, 2021). It is interesting to note that China has become a landing point, owner, or supplier for 11.4 percent of the world’s undersea cables. It is expected that China’s involvement in undersea cables will grow to 20 percent between 2025 and 2030.

Not only giant corporations are caught in the trade war between the U.S. and China. Innovative start-ups get squeezed as well. There is the case of Xiaomi, the smartphone producer. To build an apple, a Chinese apple was the ambition of Lei Jun, a great admirer of Steve Jobs. Obsessed with technology, computers, programming, he eventually founded Xiaomi in 2010. The Beijing-based technology company produces smartphones, televisions, fitness trackers, voice-command speakers, and air purifiers. Xiaomi’s sleek designs have earned it the nickname the Apple of the East, although its business strategy differs greatly from the actual California based company (Campbell, 2018).

Xiaomi pioneered full-screen smartphones and owns more than 6,000 patents – 53% of them outside of China. The company is the world’s largest purveyor of the Internet of Things, linking applications together to create smart homes. But only a tiny fraction of these can be found in the U.S. as the spat between the two countries heated up. In 2017, e.g., Chinese investment in the U.S. dropped by more than 90 percent, compared to previous years. This was mostly due to Washington’s blocking deals that could weaken America’s strategic advantage (Campbell, 2018).

Lei’s company is caught in the escalating trade war between the U.S. and China. The U.S. combats Chinese investment in the U.S. and uses tariffs to target Made in China 2025 manufacturing industries (Campbell, 2018). This broader trade war is the dominant problem for Xiaomi and leaves it vulnerable as things escalate. Xiaomi is a Qualcomm customer and, with the directive from Washington not to sell to Chinese companies, caught in the chips supply dilemma. The company, therefore, has begun manufacturing its own chips, freeing it from dependence on the U.S.

What is New in China’s EV Industry?

The electric car industry is one of the ten sectors named in the Made in China 2025 industrial policy. That means that the government will support EV production with special incentives to achieve a high-volume leadership in the industry. Under this initiative, China has become the world’s largest automotive market and it leads the world in EV sales.

Among the best-selling electric cars in China today is the Model 3 by Tesla. The Tesla plant in Shanghai is the first venture outside of the U.S. for Elon Musk. Despite efforts by the Trump administration to get U.S. companies to repatriate and cut back on their exposure to Chinese vagaries, Tesla Inc. chose to build its plant in the world’s biggest electric vehicle market. And the company has been rewarded for that with the support of Chinese top officials (Campbell, 2021)

Tesla’s story is the exception to the experiences of U.S. corporations in China. The electric vehicle maker has enjoyed a special relationship with the Chinese state. Again and again, it has extracted

perks other international companies have struggled to obtain, including tax breaks, cheap loans, and most surprising, the permission to wholly own its Chinese operations. Support from the government has helped Tesla turn China into its most important market outside the U.S. (Campbell, 2021)

Tesla's efficient operation in Shanghai has made the Model 3 not only one of the best-selling EVs in China, but also has forced China's vast array of EV manufacturers to improve their operations to stay competitive, a crucial step in government's efforts to be dominant in the electric car markets.

At this point in time, Tesla's manufactures serve the purpose of Chinese leaders who have recommended in the past that Chinese companies get foreign companies to help improve their operations. But foreign companies can never forget that it is Xi's economic strategy for all the advanced technologies to be Chinese. The question arises, what will happen once Tesla has served the purpose of the Chinese leaders? Will they continue to support the company or will they adopt a different stance in regard to the company?

If Tesla's electric cars are on the high end of the market, Hozon Auto is one of a growing number of vehicles that run on batteries and electric motors gaining popularity in lower-income parts of China because of the modest prices and lower running costs. Cheap, reliable EVs like the Hozon have the potential to open car ownership to a part of the population who previously could not afford a car (Davis, 2021).

Hozon New Energy Automobile Co. is a six-year-old EV maker backed by local governments in eastern Zhejiang province. It is among a group of companies that want to expand the market for EVs by targeting drivers outside big cities (Zhang, 2020). In July 2020, Beijing had announced an initiative involving 10 companies, including Hozon, to promote EV sales in villages, towns, and small cities with subsidies and other incentives such as preferential loans (Zhang, 2020).

As China's relations with the U.S. and other countries are deteriorating, EV makers including Hozon, are part of the broader push by President Xi to build Chinese alternatives to Western companies. In July 2020, Xi stressed that China must ensure that key and core technologies will be in Chinese hands and aspire to build strong domestic brands (Zhang, 2020).

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An Empirical Assessment of the Bowersox & Daugherty Framework Logistics/Supply Chain Management Strategy in Finland

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Abstract

The Bowersox Daugherty (1987) logistics strategy typology (Process Strategy, Market Strategy, and Information Strategy) is an important conceptual framework for studying logistics/supply chain management strategy and its role on logistics/supply chain management outcomes. The purpose of this research is to empirically assess the applicability of the typology in Finnish logistics environment. The three Bowersox/Daugherty dimensions are used to conceptualize the construct Overall Logistic Strategy (OLS), and then, the OLS was used to as an antecedent of Organizational Competitiveness (COMP). Data (n=202) for the study was collected using developed questionnaire distributed through various online social networks (e.g., Facebook Group Logistics Network Finland (1239 members), LinkedIn and within personal connections). Although the relationships among OLS--> LCE--> CSC--> COMP are confirmed, model fit statistics were relatively weak in comparison to the previous studies. Managerial and research implications are provided.

Keywords: Logistics Strategy, Supply Chain Management Strategy, Finland, Bowersox, and Daugherty typology.

Introduction

Logistics management is the process of managing material, service, information, and capital flows from the source, through the firm and to the customer (logisticsworld, 2015). It is a critical part of an organization's corporate strategy (Heskett, 1977). One conceptual framework used in studying logistics is the Bowersox/Daugherty (1987) typology, which has been the basis for longitudinal research in the United States and a series of international markets. Collectively these studies have demonstrated that the Bowersox and Daugherty typology is applicable over time in the United States and in several other countries with different cultural backgrounds and economic development levels. As such, these recent empirical studies address the concerns of Luo, Van Hoek, and Ross (2001) who stated that cross-cultural logistics research has lagged in the literature in comparison to the other areas of business discipline. The authors believe that the analysis contained in these studies validate the Bowersox/Daugherty typology as an effective model of study of logistics across cultures.

Considering the speed of the globalization, a firm's ability to manage logistics in cross-country environments would become an important success factor. Although, globalization offers significant opportunities for MNCs to shift their manufacturing and distribution around the world especially in the

developing and emerging markets, global manufacturing strategies may not be effective if not supported by the successful logistics strategies. Therefore, we strongly believe that cross-cultural logistics studies have significant potential to enrich our understanding of logistics systems and strategies applicable in different national environments. Such studies provide the critical logistics knowledge that would have important international logistics management implications in helping managers to identify similarities, and would encourage similar strategies, or identify significant differences.

Kohn, McGinnis, and Kara's (2011) study reported the role of overall logistics strategy (OLS) on logistics coordination effectiveness, customer service effectiveness, and organizational competitive responsiveness. Using multi-year data collected in the US, their findings showed that the Bowersox/Daugherty dimensions that were part of a firm's overall logistic strategy had significant impact on the company's competitiveness through the links of logistic coordination and customer service. However, even though the best way to measure overall logistic strategy (OLS) may be important to researchers and practitioners, whether the OLS should be assumed to be universal, is even a more important empirical question that deserves research attention.

This current research adopts a perspective that the Bowersox and Daugherty typology provides a strong conceptual framework in Finnish environment since it has been consistent across various countries with regards to salient dimensions of logistic/supply chain management strategy. These dimensions should be coordinated at many levels of the organization to achieve competitive responsiveness regardless of the country's environment. Through this research the authors hope to uncover the applicability of logistics/supply chain management strategy and understand the role logistics management strategy plays in maintaining and enhancing organizations' competitive responsiveness across country environments.

This paper is organized into several sections. The first two sections contain the introduction and literature review, which provides an overview of the conceptual framework for the study and briefly understand the characteristics of Finnish companies. Next sections contain the research methodology and data analysis. We then discuss the similarities and differences of logistics/supply chain management in Finland. Finally, the last sections present discussion, conclusion, and implications for logistics/supply chain management practitioners, teachers, and researchers.

Objectives of the Study

One gap in this stream of cross-cultural logistics strategy empirical has been to focus on comparative characteristics between or among two or more countries in a geographical-cultural area. The authors were able to gather information in Finland, which could then be used to study the operations and logistic practices in Finland. If the results from the data from Finland is like that of other international companies, then the authors thought that they would have more confidence in generalizing the Bowersox/Daugherty typology to the Finnish region. Conversely, if the results from Finland are dissimilar then it would be concluded that the Bowersox/Daugherty model was not robust in that region.

Therefore, this study explores whether the Bowersox/Daugherty typology is a useful framework for examining logistics strategies in a develop European nation that has different points of view on business operations and practices than those in North America or other parts of the world. The authors postulate that this study will provide an intriguing example of how logistics systems are assessed in two nations through the lens of one common measurement instrument. Furthermore, such a study would provide a strong validation of the dimensionality and the structural relations identified in the recent Kohn, McGinnis, and Kara (2011) study. We emphasize that the differences in each country's geographic size, population size, labor force make-up, infrastructure, and economic system provides an excellent platform for evaluating the validity of the research instrument, as well as providing insights into logistics strategies and outcomes in these heterogeneous countries.

Literature Review

In 1987, Bowersox and Daugherty completed a comprehensive study of logistics integration. Their research focused on three distinctly different logistic management strategy types that firms have used in their decision-making. They are summarized as follows:

- The objective of Process Strategy is to manage flows to gain control over activities that “give rise to cost”. In current terminology they are referred to as “cost drivers”
- The objective of Market Strategy is to reduce the complexity faced by customers. For example, this strategy may try to provide a single point of contact for customers that source multiple products from different divisions, or facilities, of the same firm
- The objective of Information Strategy is to coordinate information flows throughout the channel of distribution to facilitate cooperation and coordination among channel (supply chain in today’s vocabulary) members.

Three studies (McGinnis and Kohn, 1993, Kohn and McGinnis, 1997b, and McGinnis and Kohn (2002) tested the three components of the Bowersox/Daugherty typology in large U.S. manufacturing firms. The researchers found that process and market strategies were emphasized when logistics strategies were intense. They also determined that both strategies existed at moderate levels when firms used a balanced strategy approach. Additionally, they found that these strategies were present only at low levels when firms used an unfocused strategy. These studies indicate that the three dimensions (logistics process strategy, market strategy and information strategy) together, and referred to as Overall Logistics Strategy (OLS), provide a basis for assessing logistics/supply chain management effect on firm competitiveness. One significant contribution of this research was that the three dimensions of logistics strategy would be more likely to be blended than used separately as Bowersox and Daugherty (1987) originally indicated.

Additional studies have explored the value and suitability of the Bowersox/Daugherty typology in different cultures (McGinnis, Harcar, Kara, and Spillan, 2011; McGinnis, Spillan, Kara, and King, 2012; and Spillan, McGinnis, Kara, and Yi, 2013). Several studies assessed the robustness of the typology in diverse international environments of China, Guatemala, Ghana, and Turkey. These studies validated the effects of OLS on COMP through the Logistics Coordination Effectiveness (LCE) and Customer Service Commitment (CSC).

Finnish Logistics Environment

Finland provides a unique example of a high-income but sparsely populated Nordic country with high performance of logistics. Despite being a EU member, transportation costs in Finland are significantly higher than the average of those in EU due to remoteness and long hard winter conditions (Hassan, 2014). Such structural issues in the logistics environment necessitate the importance of the organizational strategies used to improve company performance in challenging supply chain conditions.

In 2017, 362 million tons of domestic cargo was transported in Finland. Domestic cargo transport in Finland is strongly dominated by road transport. 88% of domestic cargo by total weight and volume and 70% of cargo by payload-distance is transported by road transport. 10% of domestic cargo by total weight and volume and 25% of cargo by payload-distance is transported by railway transport. The major reasons to dominance of domestic road transport are concise railway network and low cargo flows between most of the origins and destinations – it’s challenging and in most cases impossible to consolidate profitable trainloads in Finland. (Official Statistics of Finland, 2017a, b.). Total export and import cargo of Finland was 204 million tons. Maritime transport is absolutely the most common transportation mode within international transport to/from Finland. 88% of export cargo from Finland and 78% of import cargo to Finland was transported by maritime transport.

In 2014, 28% of maritime transport cargo was handled as intermodal transportation units (containers, trailers, trucks, full trailers). The rest 72% of maritime transport cargo was handled as bulks, rolling vehicles and machinery itself and irregular units. The major reason to dominance of international maritime transport in Finland is, that the most densely populated areas with the most remarkable

consignees and consignors of international trade in Finland are located at the coast and hinterlands of Baltic Sea. By maritime transport, cargo transport between Finland, Sweden, Estonia, and Central Europe is available in short transportation time, low emissions and profitable price compared to land transportation modes. The most important export partner countries of Finland are Sweden (5,2% of total exports), Germany (4,7%) and Russia (4,4%). The most important import partner country of Finland is Russia (21,4% of total imports). The most significant export articles in Finland are paper and timber industry, machinery, and IT products. The most significant import articles in Finland are crude oil, natural gas, and mining industry products. (Ministry of Transportation and Communication, Finland, 2014; Official Statistics of Finland, 2017c).

The sixth edition of *Connecting to Compete*, the Logistics Performance Index (LPI) report (World Bank 2018) presented the latest worldwide view on trade logistics performance across more than 160 countries as seen by logistics professionals. High-income countries occupied the top 10 rankings in 2018, eight European countries plus Japan and Singapore - countries that have traditionally dominated the supply chain industry. Germany was at the top, scoring 4.20. The scores of quintiles the following nine countries were in a tight interval, with Sweden in 2nd with a score of 4.05 and Finland in 10th with a score of 3.97. Finland ranked among the top 10th in World Bank's Logistics Performance Index (LPI) also in 2007, 2010, 2012.

The 8th Finnish domestic logistics survey (2016) was commissioned jointly by the Ministry of Transport and Communications and Finnish Transport Agency. The focus in the report was on logistics costs, key performance indicators (KPI), logistics outsourcing and the operational preconditions in the location of Finnish manufacturing, trading, and logistics companies. Logistics is considered to have a great effect on company competitiveness and the large trading companies report that in average as much as 43% of the company competitiveness originates from logistics. In addition, some 40-50% of company competitiveness can be affected by company's own actions and decisions.

Logistics costs of Finnish manufacturing and trading firms are on average 13.9% of sales (11.9% in 2009), including costs incurred in overseas subsidiaries. The share of transportation costs (at 5.3%) has slightly increased, which is mainly due the significant incline in fuel and labor costs. The industry weighted logistics costs in 2015 were € 37.0 billion in 2011 (€ 34.7 billion in 2009), of which over half was in-house costs. Without overseas subsidiaries, total logistics costs of Finnish firms equaled 11.2% of GDP in 2011 (10.2% in 2009). The incline is mainly caused by the increasing share of manufacturing in the Finnish GDP. Low-Cost Countries appear to be an attractive option for the sourcing and manufacturing activities of Finnish companies. 55% of companies answering the question plan to expand their manufacturing in Low-Cost Countries. The corresponding number for firms expanding their domestic manufacturing was 37% Logistics key performance indicators (KPIs) that include delivery accuracy and days of sales and day of payables outstanding of Finnish firms, seem to be on a good level. The largest change from 2009 is the shorter cash to cash – cycle times of trading firms.

The companies in South Finland seem to be most satisfied with their logistics preconditions. The second most satisfied are the companies in West Finland, and the third most satisfied in North Finland. The least satisfied companies are in East Finland. A total of 2,732 respondents answered the questionnaire (32% manufacturing and construction, 28% trade, 25% logistics service providers, 5% consultants and 10% teaching) The response rate was 7.0%. Measured by sales, however, the responses cover from 70% to 90% of Finnish manufacturing, trading, and logistics firms. The data reported in 2006, 2009, 2010 and 2012 comprises the largest national logistics survey database in the world.

In Finland, transportation activities are outsourced in 90% of companies. Most Finnish companies report no outsourcing of order processing and invoicing, and half of them have not outsourced logistics IT systems. Outsourcing is expected to grow in all areas with strongest expectations in materials management, value-added services, and in IT. The logistics costs for companies engaging in the medium level of outsourcing could be higher than those of other companies. Not significant loss or gain in logistics performance due to outsourcing was observed. The more the Finnish companies are engaged in outsourcing, the more they monitor as well as collaborate internally and externally, or vice versa. In general, company management in Finland should not expect automatic gains from logistics outsourcing

and should rather analyze the company-specific characteristics that support or in some cases suffer from the outsourcing decision. (Solakivi, Töyli, Engblom and Ojala, 2013; Hilmola 2012). Ministry of Transportation and Communications Finland has made Digital Infrastructure Strategy 2025 (2018). The strategy contains measures for promoting the implementation of 5G and supporting optical fiber construction. The strategy also identifies key challenges facing the digitalization of services and existing infrastructure as well as data needs, which are crucial to, for example, automated transportation. The strategy is in line with global development trends, such as augmented reality, the Internet of Things, automation, artificial intelligence and M2M communication. High quality and reliable communication networks are paving the way for these services and new innovations. The strategy is supporting Finland's position as one of the world leaders in digital solutions and networks.

Study Methodology

Measurement Instrument

To collect data in Finland, the authors used the McGinnis and Kohn survey. Articles based on this instrument are found in McGinnis and Kohn (1993), Kohn and McGinnis (1997), and later cited work. A bilingual associate translated the instrument into Finnish. Back translation was completed to check any discrepancy in addition to potential translation errors. The authors decided that the Finnish data were collected in a manner that enables a defensible basis for a comparison of logistics/supply chain management strategies in the other countries of the world.

To operationalize the factors suggested in the Bowersox and Daugherty (1987) framework, we used Likert scales adapted from McGinnis, Kohn and Spillan (2010). The questionnaire was divided into three parts. In the first part of the questionnaire, overall logistic strategies of the company were measured using three dimensions: process strategy, market strategy and information strategy. For each dimension, statements were provided, and respondents were asked to determine their levels of agreement following a 5-point Likert-type scale with 'definitely agree' and 'definitely disagree' as anchors. In the second part of questionnaire, respondents were asked to respond to three questions regarding logistics coordination effectiveness using the same 5-point Likert-type scale measure. In the third part of the questionnaire, respondents were asked to respond to three customer service commitment and four company/division competitiveness questions.

Data Collection

The survey was link was disseminated in Facebook Group Logistics Network Finland (1,239 members), LinkedIn and within personal contacts to 1st, 2nd, and 3rd hand network. Because the survey was not disseminated by any detached gallop operator, the percentage of company types and professional positions of respondents probably differ from the percentages in whole the logistics cluster in Finland. Respondents included road cargo transportation managers and supervisions, transportation and consulting entrepreneurs, terminal and warehouse managers and supervisors, port operators, operators within supply chains of groceries and palletized goods as well as large distribution centers and factories. We asked company representatives and/or managers who were primarily responsible for their respective companies' logistics operations to complete the questionnaire. We specified the importance of the respondents' scope of responsibility to ensure that they have significant knowledge of the company's logistics activities and/or infrastructure. A total of n=202 completed responses were received.

Analysis and Results

Descriptive analysis of the sample profile reveals that majority of the participants worked for corporations, held titles mostly functional area manager or supervisor, highly educated, more than half of them three hundred or more employees, and had annual earnings more than \$5 million. Table 1 summarizes the profiles of the respondents who participated in the study.

Table 1. Finland Dataset Respondent profile

	Frequency	Percent
<i>Company type</i>		
• Corporation	167	82.7
• Partnership	16	7.9
• Other	19	9.4
<i>Position</i>		
• President	7	3.5
• Vice-President	15	7.4
• General Manager	24	11.9
• Functional Manager	52	25.7
• Supervisor	54	26.7
• Owner	12	5.9
• Other	38	18.8
<i>Education</i>		
• High School	3	1.5
• Vocational School	26	12.9
• Associates Degree	1	.5
• Bachelor's Degree	112	55.4
• Master's Degree	54	26.7
• Doctoral Degree	6	3.0
<i>Full-time employees</i>		
• 0-5 employees	7	3.5
• 6-10 employees	4	2.0
• 11-20 employees	4	2.0
• 21-50 employees	20	9.9
• 51-100 employees	23	11.4
• 101-200 employees	20	9.9
• 201-300 employees	14	6.9
• 301-400 employees	26	12.9
• 401-500 or more employees	84	41.6
<i>Average annual sales</i>		
• Under \$1 million	27	13.4
• \$1 million to \$2 million	24	11.9
• \$2.01 million to \$3 million	32	15.8
• \$3.01 million to \$4 million	17	8.4
• \$4.01million to \$5 million	14	6.9
• Other	88	43.6

We then checked the construct reliabilities for all constructs in the model Table 2 reports the construct reliabilities Although the reliability scores reported in Table 2 are either right at or marginally below the levels suggested (0.70) in the literature, they were deemed to be satisfactory considering that the scale items used in our study have been previously used in several studies and have established content validity and reliability.

Table 2: Constructs and Items¹

Scales/Items*	Cronbach Alpha
Overall Logistics Strategy (OLS)	.62
1. In my company/division, management emphasizes achieving maximum efficiency from purchasing, manufacturing, and distribution.	
2. A primary objective of logistics in my company/division is to gain control over activities that result in purchasing, manufacturing, and distribution costs.	
3. In my company/division, management emphasizes achieving coordinated physical distribution to customers served by several business units.	
4. A primary objective of logistics in my company/division is to reduce the complexity our customers face in doing business with us.	
5. In my company/division, logistics facilitates the coordination of several business units to provide competitive customer service.	
6. In my company/division, management emphasizes coordination and control of channel members (distributors, wholesalers, dealers, retailers) activities.	
Logistics Coordination Efforts (LCE)	.70
1. The need for closer coordination with suppliers, vendors, and other channel members has fostered better working relationships among departments within my company.	
2. In my company logistics planning is well coordinated with the overall strategic planning process.	
3. In my company/division logistics activities are coordinated effectively with customers, suppliers, and other channel members.	
Customer Service Effectiveness (CSE)	.61
1. Achieving increased levels of customer service has resulted in increased emphasis on employee development and training.	
2. The customer service program in my company/division is effectively coordinated with other logistics activities.	
3. The customer service program in my company/division gives us a competitive edge relative to our competition.	
Company/Division Competitiveness (COMP)	.61
1. My company/division responds quickly and effectively to changing customer or supplier needs compared to our competitors.	
2. My company/division responds quickly and effectively to changing competitor strategies compared to our competitors.	
3. My company/division develops, and markets new products quickly and effectively compared to our competitors.	

*Scales: 1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly agree; See COMP-4 for that variable's scale.

¹Adapted from: McGinnis, Michael A., Jonathan W. Kohn, and John E. Spillan (2010), "A Longitudinal Study of Logistics Strategy: 1990-2008," *Journal of Business Logistics*, Vol. 31, No. 1, pp. 217-235.

Exploratory and Confirmatory Factor Analysis

To confirm the underlying factor structure, we conducted exploratory and confirmatory factor analysis. Although the exploratory factor analysis with Varimax rotation resulted in three factors (dimensions) of OLS with a cumulative explained variance of 53%, analysis of the factor loadings showed that six out of nine items examined were loaded onto a single factor, indicating that we did not have data support for the three dimensions of OLS as conceptualized. Next, we used CFA where all six items were forced to a single construct, labeled as OLS, and examined the goodness-of-fit of the model using various fit indices utilized in previous studies, including the χ^2 statistic, comparative fit index (CFI)

goodness-of-fit index (GFI); standardized root mean, square residual (SRMR); and root mean square error of approximation (RMSEA). The results of the estimation of the single factor to represent the overall logistics strategy (OLS) revealed very good fit ($\chi^2 = 8.246, p < .51$; GFI = 0.98; CFI = 0.99; RMSEA = 0.01). Those six statements representing the OLS are used for further analysis to assess the relationships among hypothesized constructs. In addition, Table 3 shows the inter-construct correlations.

Figure 1—CFA Overall Logistics Strategy (OLS)

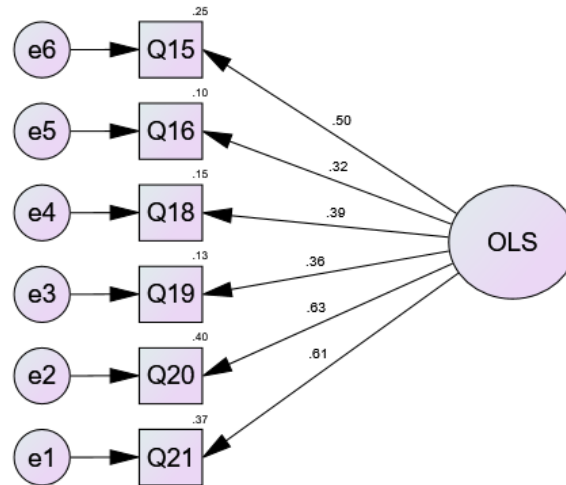


Table 3—Inter-construct Correlations

	OLS	LCE	CSC
LCE	.41		
CSC	.64	.87	
COMP	.54	.47	.32

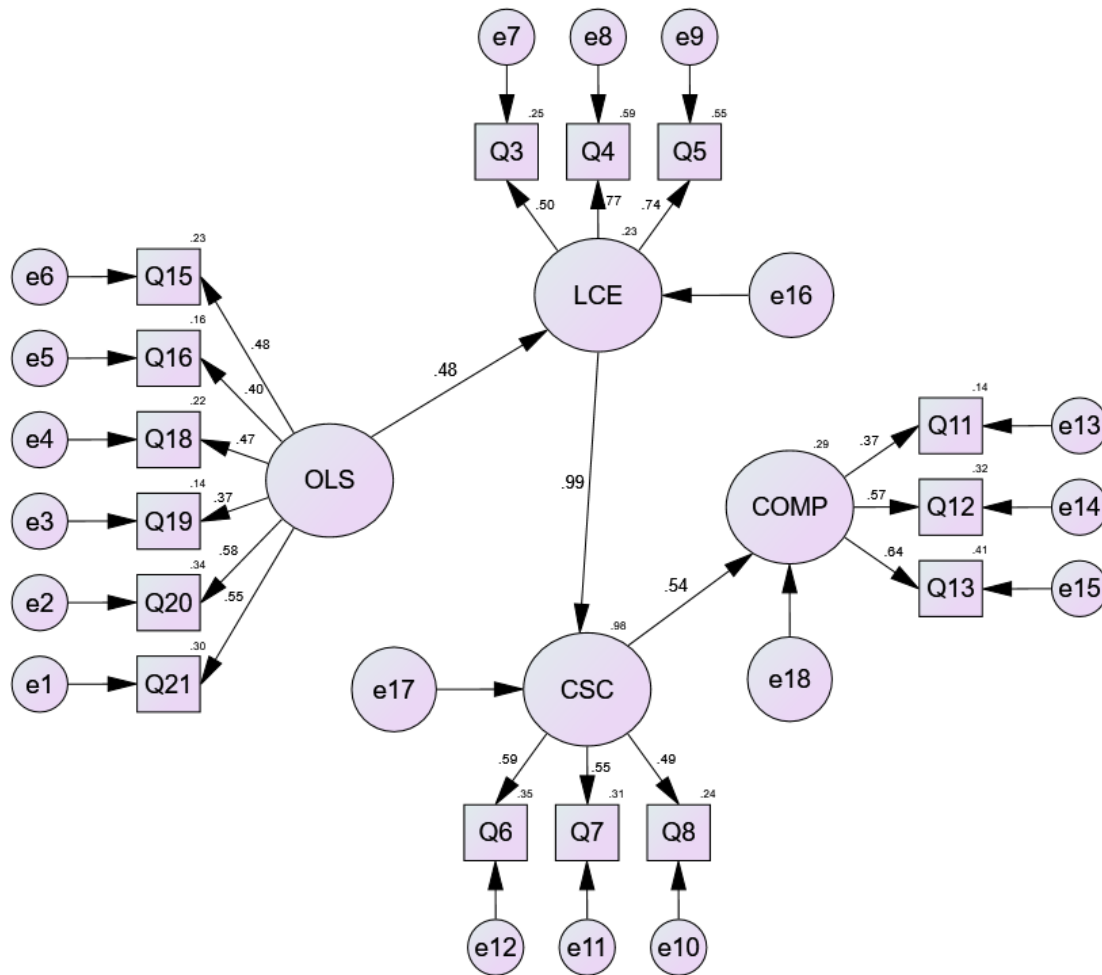
All correlations are significant at $p < .01$

Structural Equation Model

The structural model used conceptualizes that OLS influences COMP through LCE and CSC. In other words, the significance of the effect increases then the LCE and CSC are included in between OLS and COMP. Unlike previous studies where they used three dimensions to operationalize the OLS, our model uses only a unidimensional construct of OLS comprised of six scale items. Figure 2 displays standardized coefficients for the linkages and the R-square values for the constructs.

All paths are statistically significant and the model fit values for the structural model would be considered “marginal” (GFI= 0.853; CFI=0.702; RMSEA= (0.106). These results provide a partial support about the robustness of the Bowersox & Daugherty model that has been assessed in other environments. One can conclude that, although not very strong, overall logistics strategy positively influenced the Finnish manufacturers’ competitive responsiveness through the LCE and CSC constructs

Figure 2—Overall Logistics Strategy and Competitiveness



Chisquare=282.578, p-value=.000, GFI=.853, CFI=.705, RMSEA=.106

Conclusions

The results of the analyses and country comparisons in this manuscript provide insight into logistics strategy of a small country that has a well-developed infrastructure, fully educated population and a very skilled work force. Because Finland is a member of the European Union (EU) and depends on goods and services of this large trading Union, it has developed a sophisticated supply chain system that easily connects all parts of Finland with any vendor in the EU. With modern transportation systems, advanced manufacturing settings and a political economy that is stable and growing, Finland is well established in operating a very efficient supply chain system. Almost all the companies i.e., multinationals are using state of the art supply chain technology and equipment. As mentioned, the modeling in this study confirms the strong competitive capabilities that exist among Finnish companies that are involved in supply chain activities.

Over the last year, however, the world has been engulfed in a massive Covid-19 pandemic that has affected just about all supply chains around the world. The Covid-19 pandemic was a global

disruption across trade, finance, health, education, business, and society. This was like few others in the past 100 years (Harapko, 2021). The global pandemic presented major challenges for the manufacturing industries (Mattula, 2021). In Finland, Covid-19 hit services harder than manufacturing. Because the Finnish economic situation was generally strong during Covid-19 crisis, the outcomes turned out to be less negative than OECD's early predictions. Finnish economy has displayed a K shaped recovery. This economic outcome occurred because the Finnish government implemented effective crisis management measures (Mattula, 2021). While the pandemic created havoc and continues to linger and disrupt many supply chains, it did expose to supply chain executives the need to deal with disruptions along the supply chain with flexibility and resilience is critical. Developing technical business structures that protect against disruptions. Resilience is a strategic goal in day-to-day decision-making (Harapko, 2021). This will require reformatting supply chain architecture in Finland and throughout the world.

Limitations

While this study provides a glimpse of some of Finnish supply chain environment, it would be interesting and important to understand the regional and inter-country supply chain dynamics that occur as Finnish companies transact business among their EU partners. Investigating the constraints and opportunities that exist among regional business organizations about their supply chain crisis exposure seems to be an area that is not fully developed. Investigation into this area would provide insight into the strengths and weaknesses that supply chain managers can exploit to make the supply chain system more resilient and able to deal with disruptions more effectively.

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Cross-Cultural Inclusion: Chinese Students in the American Classroom

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Abstract

Chinese students are viewed as comparatively quiet, non-active contributors in the western classroom setting. Migration theory is used to explain potential reluctance to assimilate with domestic counterparts while cross-cultural management provides insight into the origins of Chinese students' behavior. Using in-depth interviews, this study gathers the student perspective to share with American faculty to create a more positive and inclusive learning environment.

Keywords: Classroom Behavior, China, Cross-Cultural, Migration

Introduction

The number of international students pursuing a university education in the United States exceeds one million (Institute of International Education, 2017). Of that population, more than 30% come from China (Li, et. al, 2013; Montgomery, 2017). The change in class composition creates issues dealing with perceived passivity or inability to integrate. Often, faculty's educational background is very discipline specific, with little or no training in the areas of educational pedagogy or cross-cultural communication. The combination of Chinese students in a new international environment and faculty without significant experience in cross-cultural education often leads to an unsettling classroom environment.

This paper will provide faculty in the United States with two theory-based explanations for the perceived passivity of Chinese students, thus contributing to a deeper understanding of the challenges that these students face. We conclude with opportunities to develop a more inclusive learning environment that will benefit faculty and students alike.

Literature Review

International Students and Migration Patterns in the United States

The increasing numbers of international students flowing into U.S. universities can be examined and explained within the context of migration research (King & Raghuram, 2013). The migration of these students represents an identifiable population movement that shares characteristics with any one of many large population migrations. Upon their arrival in the United States, international students encounter a set of experiences and difficulties that typically confront emigrants upon their arrival in any new country.

Individuals migrate for a variety of reasons and the movement of students from one country to another country represents one type of population movement. In general, individuals emigrate to a new country as the result of various political, economic, or social factors that force them ('push') to leave their country (e.g., famine, conflicts, conscription). Another reason is to entice them ('pull') to locate in a new country (e.g., freedom, opportunity, tolerance). Such forces are present in the mass migrations in the middle of the 19th century from Ireland (famines) and Germany (political and economic turmoil) and from Eastern Europe in the late 19th and early 20th centuries (poverty and religious persecution).

In the case of contemporary international students, the move is prompted by an education differential as the U.S. university system is viewed as among the best in the world. In fact, the Times Higher Education (THE) University Ranking system (2017) used 13 calibrated performance measures and found that six of the top 10 and 15 out of the top 20 universities in the world are in the United States. International students collectively recognize the economic value of a U.S. university education and they make a conscious decision ('pulled') to travel and pursue a U.S. degree. This degree increases their personal human capital, enriches their own life, and benefits their country of origin.

The nature of the international students' migration status is uniquely different from that of most immigrants. Whereas many emigrants contemplate staying permanently in the destination country, both the Immigration and Naturalization Service and U. S. State Department classify international students as visitors with the expectation or requirement that they will return to their country of origin upon completion of their academic/exchange program. This is not the only possible outcome. Some international students remain in the United States for a short period of time before returning home while others remain in the United States permanently, thus creating a more diverse workforce (Trendowski, S. et. al, 2019). In fact, for many international students, their initial thoughts regarding their migrant status will change over the course of their program of study depending upon personal and professional considerations (Hazen & Alberts, 2006). Regardless of the outcome of their emigration, the experience of the international student can be viewed within the framework of the cross-cultural psychology of migration, both as to the overall nature of the response of students (in the aggregate) to their new surroundings, as well as to the stresses that are brought to bear on the individual student during their transition to a new environment.

A substantial body of research on migrant adaptation examines the psychological impact of migration as it directly relates to the immigration experiences of international students (Berry, 1990, 1992, 1999; Kim et. al, 2017) Migration is a complex process yet across this complexity certain patterns emerge which are consistently applicable to the experiences of international students. Culture is one of these patterns and has a strong influence on both the continuity and change of human behaviors in the new environment (Berry, 1997). Individuals in both the country of origin and the host country have shared patterns of behavior governing their social interaction with other members of their own society. Individuals raised in one culture experience a completely different and wider range of psychological pressures when they immigrate to a host country with its own separate, unique culture. The culture of origin and the culture of the host country jointly exert strong influences on immigrants at both the group and individual levels; with both levels devising their own set of strategies to best respond to the new environments. This phenomenon isn't solely applicable to Chinese student studying in the US. Other studies have found similar patterns with Chinese students studying in Australia (Zheng, Sang, & Wang, 2004), Canada (Zhao & McDougall, 2008), and the United Kingdom (Gu & Maley, 2008).

Empirical Studies on Chinese International Students

Throughout the past 20 years, the number of Chinese students studying in the United States has been increasing (Li, Et. al, 2013, Montgomery, 2017). Though the number of studies of Chinese students in the United States is somewhat limited (Yuan, 2011), the findings are relatively consistent. Sun and Chen (1999) identified three dimensions of difficulties experienced by Chinese students studying in the United States. These difficulties included language ability, cultural awareness, and academic achievement.

The academic difficulty (Huang, 2006) experienced by Chinese students were mainly speaking and listening skills. Therefore, highlighting the importance of the student’s grasp of the English language. Although Chinese students learn English at home, many students are not prepared for English-based instruction (Yuan, 2011). As a result, Chinese students pursuing degrees in social sciences demand greater cultural and language proficiency than their science and technology counterparts. The cultural component extends beyond the classroom as international students are confronted with different foods, regulations, and customs, in addition to a new educational system (Kim, 2012). Culture shock contributes to a sense of helplessness or inferiority in new setting (Wang, 2009; Shi & Wang, 2014). Sun and Chen (1999) found that the lack of English proficiency, coupled with cultural differences (Trendowski & Stuck, 2018) contributed to uneasiness in the American classroom.

Acculturation is further limited by a heavy workload and study habits (Li & Stodolska, 2006). Most of the students interviewed by Li and Stodolska (2006) were dissatisfied with their leisurely lives in the United States, which suggested a preference to spend leisure time with other Chinese nationals (Zhao, Kuh, & Carini, 2005). Many immigrant groups place intrinsic value on the maintenance of their cultural identity (Ward & Kus, 2012). The cultural shock impacts academic progress as the new setting has few, if any, reference points from back home. Chinese students are programmed to memorize course material without questioning or debating its merits (Gao & Ting-Toomey, 1998; Sit, 2013).

Cultural Maintenance

One specific migration strategy focuses on dual issues of cultural maintenance and contact-participation (Berry, 1997; Chen et. al, 2014). Cultural maintenance represents the degree to which immigrant groups place intrinsic value or importance on the maintenance of their cultural identity in the new environment (Ward & Kus, 2012). Some immigrant groups consider cultural maintenance very important and strive to maintain their ethnicity, customs, and unique cultural identity. Other immigrant groups place little value on cultural maintenance and are content to allow their cultural identity to fade. Contact-participation refers to the degree in which immigrant groups involve, or adapt, themselves to the majority culture of their new environment. Some immigrant groups highly involve themselves with other cultural groups in the new environment, while some immigrant groups limit most of their interactions in the new environment to their own cultural group.

In summary, some immigrant groups will place value on engaging the newer society, opting for complete involvement with the dominant culture, while other immigrant groups will opt for very little, if any, involvement with the larger society within their new country. Figure 1 provides an illustration of both sides of this issue and labels each of the potential responses as an acculturation strategy.

Figure 1: Contact-Participation and Cultural Maintenance

Adapted from: Berry, 1997.

		Contact-Participation - Is it considered to be of value to maintain one’s identity and characteristics?	
		Yes	No
Cultural Maintenance - Is it considered to be of value to maintain relationships with larger society?	Yes	Integration (A)	Assimilation (B)
	No	Separation/Segregation (C)	Marginalization (D)

The two divisions of immigrant behavior in migration theory – cultural maintenance and contact-participation – can be seen and contrasted in Figure 1. Here, quadrant B represents full contact-participation “Assimilation”, while quadrant C represents full cultural maintenance “Separation-Segregation.” The strategy of assimilation, as illustrated in quadrant B, results when an immigrant group decides there is no value in maintaining their cultural identify and make a conscious decision to interact with the larger society. Over time the group loses its self-identity as it merges into the dominant culture.

Such behavior might be typical of immigrant groups that realize they will never return to their country of origin. Such immigrant groups feel that any intrinsic value that attaches to maintaining their culture negates gains offered by the host culture. This was a common phenomenon of most emigrant groups to the United States during the 1800s, who primarily followed this assimilation strategy as they exerted great efforts to become ‘Americans’.

In contrast, the quadrant A strategy of integration, like that of assimilation, interacts heavily with the host culture and works within the existing society but, unlike assimilation, the strategy of integration concentrates also on maintaining their cultural identity. As an example, Orthodox Jews in the United States have maintained their culture and devotion to Torah while fully integrated into the larger (non-Jewish) society. The result of the integration strategy is the presence of an ethnic group in the host country pre-disposed to working with the larger society.

As mentioned above, separation-segregation in quadrant C best represents the migration theory of cultural maintenance. This strategy requires maintenance of the immigrant group’s cultural identity with little or no contact with the host culture. The “separation” aspect of this strategy represents an immigrant-initiated strategy while the “segregation” aspect represents a dominant-group-initiated-strategy. Participation with the host society is minimal and the immigrant group maintains independence and autonomy. In the United States, Mexican immigrants represent the separation strategy as they maintain their own culture and exhibit slow patterns of assimilation.

The last quadrant D, marginalization, usually the result of forced assimilation, has the immigrant or migrant group ignoring both their own cultural identity and having little, if any, relationship with the larger society. The Native American reservations within the United States, with cultures formed by forced relocation, would be a classic, and unfortunate, example of the marginalization strategy.

Migration Pattern of International Chinese Students in the United States

Since specific members of a group often can, and will, pursue individual strategies, it is difficult to generalize behavior among immigrant groups. This paper, however, will argue that the central tendency of Chinese international students, in terms of their acculturation behavior, regularly appears to be a strategy of separation. Chinese students seem to value the maintenance of their culture. On one hand this may simply be that they view Chinese behavior and traditions as part of their ethnicity, and they maintain their cultural values to maintain their specific identity. On the other hand, in today’s post 9/11 environment, another reason may lie in the fact that it is much more difficult for international students to remain in the United States. Maintaining their culture simply acknowledges the fact that they will return to their home country at the end of their education and, therefore, assimilation provides few or short-lived benefits, and their time in the U. S. is so short that international students may not see value in assimilation.

Cultural maintenance reveals itself as Chinese students demonstrate a preference for participating almost exclusively in Chinese clubs, cultural events, and other social activities (Chataway & Berry, 1989). This form of cultural maintenance has its origins in China’s collectivist society. Collectivistic, or group oriented, cultures share interdependence with group members but generally hesitate to cooperate with non-group members (Triandis, 1989). Partly due to this collectivistic cultural orientation, it appears that Chinese students do not place much value on maintaining relationships with the larger society. There is an overall sense that these students do not have a strong commitment to establishing friendships, nor do they have an interest nor desire in forming more than short-term relationships with host nationals (Trice, 2007). Chinese students are insular, will often live with other Chinese students, and speak mostly their native language (Chataway & Berry, 1989). They also demonstrate a disposition for establishing friendships with students from their own country or international students from other countries over students from the host country (Zhao, Kuh, & Carini, 2005).

Taken together, these more insular behaviors are consistent with the separation strategy of acculturation. Also contributing to the strategy of separation, however, is the treatment accorded international students by both their host country institutions and host country students. The institutions often view international students as a stream of revenue, and host institutions often ignore the cross-

cultural, academic considerations and treat international students like uninvited guests (Lee & Rice, 2007). In an era of scarce resources, support services provided for international students in many instances are rudimentary. Any services devoted to international students simply subtracts from the revenue stream they generate. In defense of international students, although Chinese students may not be predisposed towards new friendships, American students make little attempt to initiate friendships. At times, American students can exhibit ethnocentric behavior, discriminate, and favor shallow relationships (Trice, 2007).

Compounding the problems of international students in host country universities are the stresses experienced at the individual level. Labeled 'psychological acculturation', 'culture shock', or 'acculturative stress', the basic idea is that it is both immensely stressful and challenging to journey to another country to live, work, or study. Although the physical distances from shore to shore might seem great, the distance between cultures is even greater. Culture shock contributes to a sense of helplessness and inferiority among international students Wang, 2009; Shi & Wang, 2014). International students enter a new environment and they are uncertain as to expectations about their performance. Students must acquire a new set of social and academic skills while at the same time adjusting to their role as a foreigner in a new land. Disappointment occurs as their prior expectations about the host country are disconfirmed (Hechanova-Alampay, Beehr, Christiansen, & Van Horn, 2002). Presented with a new culture with its own norms and customs can lead to frustration and social difficulties (Tochkov, Levine, & Sanaka, 2010). The absence of family and friends can result in homesickness or nostalgia for the familiar (Hechanova-Alampay, Beehr, Christiansen, & Van Horn, 2002).

In addition to cultural shock, another obvious problem is that of a different language accompanied by a different style of communication. Although Chinese students learn English in their home country, the method of instruction centers heavily on taking tests; upon arriving in the United States, most Chinese students are not ready for English-based instruction. Furthermore, Chinese students' attitudes toward cultural assimilation may vary depending on their majors (Yuan, 2011). Chinese students pursuing social science majors tend to report more difficulties about class discussions than those of pursuing science and technology majors, since social science majors tend to demand higher level of English skills and a strong cultural intelligence (Marcotte, et. al, 2019) of American culture (Yuan, 2011).

Problems may arise with both verbal and non-verbal communication. The former has to do with the level and speed that Americans versus Chinese students speak, and the latter simply with completely incomprehensible messages being sent non-verbally. The language difficulty often leads to a sense of social isolation, loss of identity, loneliness, marginalization, discrimination, and alienation. Adding to the confusion are the logistical problems of establishing oneself in a new country. Students are in a new living environment confronted with different foods, regulations, climate, transportation system, banking system, healthcare system, as well as a new educational system (Kim, 2012). Such changes can lead to disorientation, increased anxiety levels, depression, lowered mental health status, and heightened psychosomatic and psychological symptom levels (Berry, 1990).

While institutional disinterest, cultural shock, communication difficulties, and logistical differences all contribute to the Chinese student's predisposition toward a separation strategy of acculturation, a final issue can also be the university faculty themselves. Faculty members may view students in a classroom as rather homogenous. The presumption is that all students enroll in the class for one of several reasons (required, elective, exploratory) and that their performance in the course is a function of the time and effort devoted to the course. To the extent that an international student successfully engages in the class, it is easy to assume that the student is a 'strong' student. Conversely, to the extent that an international student struggles in a classroom or exhibits passive behavior, the assumption usually is that the student is a 'weak' student. Faculty may assume that success and failure among international and host country students is a function of identical student attributes. If the faculty guides the learning process within the confines of their professional discipline without consideration of the disparate skills and backgrounds of the students, such an approach ignores the tremendous forces that Chinese international students encounter as sojourners. Culture exerts a tremendous influence and favors a strategy of separation from host country students, rather than one of assimilation or integration.

Acculturative stresses collectively detract from the energy and effort that students can devote to any given course. Faculty members need to conscientiously think about accommodating international students and design strategies to focus on integration and inclusion (Trendowski & Trendowski, 2020), to have the opportunity to measurably improve the experiences of international students in university classrooms.

Cultural Values of International Chinese Students and Classroom Behavior

The cultural differences between Chinese students and U.S. students create unique challenges. Understanding the cultural differences offers the potential to create a stronger learning environment for both domestic and international students. One way to examine such cultural differences is using cross-cultural models often employed in international management and cross-cultural psychology. Models of Chinese and American national cultural scores that highlight the similarities and differences between their respective cultures offer the ability to highlight differential behavior in the classroom. To the extent that such models capture cultural differences, the areas of greatest cultural differences (areas where the scores are the widest apart) provide an indication where the greatest cross-cultural differences are most likely to occur within the university setting.

Specific models of culture range from the work of anthropologists Levi-Strauss (Levi-Strauss, 1963) and Edward Hall (Hall, 1959) in the 1950s, to modern scholars such as Geert Hofstede; Hofstede, 2002), Trompenaars (Trompenaars & Hampden-Turner, 1998), and the GLOBE project (House, Hanges, Javidan, Dorfman, & Gupta, 2004). Although human behavior and culture are complex and cultural homogeneity within a single country is often non-existent, a multidimensional model of culture that combines separate culture value dimensions offers the potential to offer insights into the complex intercultural classroom. To highlight cultural differences between Chinese and U. S. students, this paper uses numerical data from the work of Hofstede comparing attitudes and values held by 116,000 employees of IBM in 50 countries and three regions. Hofstede's original work constructed indices representing cultural differences on the dimensions of power distance, individualism, uncertainty avoidance, and masculinity. According to Hofstede (2018), the greatest cultural differences between the United States and China exist along three cultural value dimensions – power distance (PDI), individualism versus collectivism (IDV), and long-term versus short-term orientation (LTO).

1. Power Distance (PDI) – measures the extent to which less powerful members of organizations accept an unequal distribution of power, which in turn leads to hierarchical vs. egalitarian forms of human behavior.
2. Individualism (IDV) – measures the degree to which people in a country prefer to act as individuals or members of a group, which in turn leads to group-oriented vs. individualistic forms of behavior.
3. Long-Term Orientation (LTO) - measures individual's devotion to work ethic and their respect for tradition.

Table 1: Scores in the Dimensional Model (Hofstede, 2018)

<u>Dimensions</u>	<u>China</u>	<u>USA</u>
PDI	80	40
IDV	20	91
LTO	94	29

Table 1 presents the scores for China and the United States on each of these dimensions (Hofstede, 2018). Cultural differences between Chinese and U.S. students, as reflected in Hofstede's dimensions of Power Distance (PDI), Individualism (IDV), and Long-Term Orientation (LTO) directly

translate into noticeable differences in classroom behavior. Such differences are dramatic yet may not appear as such to faculty members who have little experience in teaching in a diverse classroom.

Power Distance. The power distance dimension deals with authority and the degree of inequality among people that the population of a given country accepts as normal. In a high authority country like China, individuals (students) accept differences in power or inequality more willingly and have greater hierarchical tendencies. In a low authority country such as the United States, students do not accept differences in power as willingly and have more egalitarian tendencies (Hofstede, 1984). China scores high in the authority dimension, in part, because 4,000 years of political centralization has led to a tradition of obedience. For example, the Chinese use of dynasty names to refer to periods in history illustrates the degree of emphasis and importance placed on centralized leadership. Chinese culture has nurtured the idea that authoritarian behavior is essential to maintain the stability of social systems. Many Chinese rulers adopted Confucianism as a strategic tool to achieve social stability and civil justice (Leung & Wong, 2001). According to traditional Confucian views, the stability of society rests on unequal relationships between people in a hierarchical social structure. Much of China's culture reflects Confucian thought and places a great deal of importance on the hierarchy and harmony of social groups. The significance of a strongly hierarchical social structure is based on the idea that a harmonized society is created when every person knows and stays in their proper position. While treating people differently according to the social status is contrary to many Western ideals, it has been a tool used to maintain harmony and balance in China for thousands of years.

Power Distance and Classroom Behavior. In high authority societies, an unequal distribution of authority or power is acceptable and expected at the university level. One of the single greatest differences between Chinese students and Western educators lies under this authority dimension and its effect on communication. Chinese students, raised in a high authority culture, are more accustomed to hierarchical structure in the classroom and to faculty with an autocratic teaching style. These students will conduct themselves in a manner that comports with their lower ranked role and exhibit behaviors that include higher levels of obedience, outward respect, passivity, and silence toward the instructor. Western professors, on the other hand, are often used to creating the informal, egalitarian environment in the classroom and employ a more democratic style of teaching that is a central tendency in low authority cultures.

Hierarchical/egalitarian differences lead to the top-down communication that is one of the most significant forms of classroom interaction in high authority cultures. In the traditional Chinese culture, the ideal instructor is a paternalistic figure, much like a kind and wise father, who in the end 'always knows best'. The communication process begins and continues from the professor's side throughout the duration of the instruction. Students expect direct instruction, and it is common to have Chinese professors lecture completely out of the book. A deeply embedded cultural and historical emphasis on examinations as a prerequisite for promotion reinforces this educational structure. Traditionally, Chinese students concentrated on memorizing course material without questioning or debating the merits of the subject (Gao & Ting-Toomey, 1998; Sit, 2013)

Western professors can base their teaching on text as well, but coming from a more egalitarian, low authority culture, they expect a shared learning process, with students entering dialogue, questioning, and exhibiting other interactive responses during class. Chinese students are not comfortable with this idea of being an equal part of the learning process or in taking the initiative in a co-learning situation. They are more accustomed to being passive recipients of a professor's top-down, one-way communication style. This can frustrate many Western professors who will recommend, even in the syllabus, that students regularly participate during class, only to discover that they are continually met with a 'wall of silence'. In reality, their Chinese students are confused about what exactly is expected from them and feel extremely uncomfortable engaging verbally with the rest of the class.

American professors of Chinese students will often find an unusual degree of respect and obedience given to them as faculty. However, it is important to note that students in a high authority

culture give respect and obedience to the faculty position itself ('ascribed status') rather than to the individual person or to the individual's personal leadership characteristics. In a low authority country such as the U. S., the teaching position is given a certain minimal amount of respect and individual faculty must earn respect from their students beyond that minimal level ('acquired status'). The downside of this differential view of faculty is that Chinese students will formally give respect to higher status individuals (e.g., faculty) as a cultural ritual, yet at the same time the students may not internalize that respect. This lack of internal respect can reinforce the general passivity already inherent in the hierarchical and 'top-down' communication characteristics of high authority cultures. In summary, the high authority cultural dimension impacts the Chinese student at American university's scenario in two primary ways – students will personally distance themselves from the faculty and there will be low feedback and class interaction which in turn will lead to faculty perceptions of passivity. Table 2 summarizes key differences in the learning environment directly related to due to observed differences on Hofstede's power dimension.

Table 2: Authority Dimension: Learning/Teaching Implications

China (Score = 80)	USA (Score = 40)
<ul style="list-style-type: none"> • More hierarchical classroom • More autocratic teaching style • Top-down communication • Acquired teacher status 	<ul style="list-style-type: none"> • More egalitarian classroom • More democratic teaching style • Side-by-side communication • Achieved teacher status

Individualism. The individualism dimension provides an optimal understanding of Chinese student behavior in U.S. higher education. Differences in East-West communication styles are profound and the difference between the two scores provides insight into most of the cross-cultural conflicts between Chinese and Westerners in higher education. The U.S. is more individualistic than any other country in the world, while only four countries in the Hofstede databank (all in South America) are more collectivistic than the Chinese culture. High individualism represents the degree to which people in a country prefer to act as individuals rather than as members of groups. High individualism exists when people define themselves primarily as separate individuals and make their main commitments to themselves. It implies loosely knit social networks in which people focus primarily on taking care of themselves and their immediate families (Adler & Gunderson, 2008). The opposite, low individualism, pertains to 'societies in which from birth onwards are integrated into strong, cohesive in-groups, which throughout people's lifetime continues to protect them in exchange for unquestioning loyalty' (Hofstede, 2002). Low individualism is characterized by tight social networks in which people strongly distinguish between their own group and other groups, as well as by their tendency to hold more common goals and objectives than the high individualism goals that focus primarily on self-interest.

In low individualism societies such as China, a child learns to respect the group to which he or she belongs, usually the family, and to differentiate between in-group members and out-group members (typically all others outside of the family, regional ethnic group, or locale). When these children grow up, they remain members of their in-group and expect the in-group to protect them when they are in need. In return, they are expected to give both a tremendous degree of loyalty to their in-group, as well as to give negligible commitment to all out-groups, like American faculty and U.S. university systems. One of the fundamental reasons for China's unusually low individualism is the emphasis on group relationships that arose with the country's agrarian origins and the concomitant parameters of intense social contact. Maintaining harmony with the immediate social environment and the family has extended to most facets of Chinese society.

Individualism and Classroom Behavior. In an extremely relationship-oriented culture, with its resulting emphasis on high levels of social harmony, Chinese students will communicate in a manner quite different than that of the highly individualistic U.S. faculty. Chinese students will send and receive messages based as much on the indirect context of the message (which includes their relationship to the messenger, status, sensitivity to harmony of group, etc.) as on the actual, direct content of the message itself. The primary reason for the Chinese student's form of indirect communication is the low individualistic emphasis on the harmony of the group, avoidance of conflict, and maintaining the individual's public face. Since Chinese do not care for bluntness or public conflict, they will tend to be most comfortable when there is a certain level of harmony in the classroom. When low individualistic students communicate in a more indirect manner, using the subtler context of the message to communicate rather than using direct words, there is less chance of breaking group harmony or causing someone to lose face. *What* a Western educator says to them (content-based or direct communication) often matters less than *how* it is said (context-based or indirect communication).

Based on their relationship-oriented culture, face or *mianzi* - the regard in which one is held by others or the light in which one appears - is vitally important to the Chinese student. Causing someone to lose face, publicly or in front of their classmates (through criticizing, failing to treat with respect, or other potentially insulting behavior) results in a loss of cooperation and even, in extreme occasions, with subtle retaliation against the professor months after the original action transpired. An example of saving face is the Chinese propensity to rarely utter the word 'no'. They will only hint at difficulties, with just the slightest acknowledgement that they have a negative viewpoint or response to the issue at hand. Some of the low individualistic ways of saying 'no' are silence, counter questions, tangential responses, exiting or leaving, delaying answers, making excuses, or criticizing the question itself. Because of this propensity, the yes-or-no questions common to American professors are too direct and put pressure on the Chinese student to say 'yes' in order to maintain group harmony. Oddly enough, a Chinese student answering 'no' could be perceived within their own cultural context as making the American professors lose face by disrupting the harmony of the classroom.

Indirect, subtle communication patterns, and the use of silence to save face, lead to one of the major challenges for a U.S. professor of Chinese students - the issue of feedback. It is difficult to instill in Chinese students the need to let the professor know when they do not understand the material taught or the way faculty deliver the material. Historically, this issue has its origins in the Confucian concept of education - a process based on memorizing endless books and taking examinations over the contents. This created more passive Chinese students with an incredible mastery and discipline for the memorization process but without the depth of application, internalization, or in-class dialogue.

In a low individualistic culture, the significance of relationships supersedes that of individual tasks. The Chinese word *guanxi* refers to the concept of drawing on interpersonal connections and relationships to secure a continued exchange of favors. This means that Chinese students tend to use intermediaries to overcome difficulties and resolving conflicts with those outside their group. This use of intermediaries can be seen as one the ultimate forms of indirect communication. A principal difficulty with the use of intermediaries is that high individualistic, direct-communicating American educators are not used to this as a student format in overcoming obstacles and course conflicts.

In summary, like the power distance dimension, the low individualism cultural dimension impacts Chinese students at American universities in two primary ways. First, students will tend to keep their strongest loyalties to their own in-group of other Chinese students and feel little loyalty to the out-groups of American faculty, staff, students, and university structure. Second, like differences attributable to the power dimension, there will be low feedback and class interaction, although with low individualism it is due to the idea of saving face and harmony, and faculty will have the same perception of Chinese student passivity. Table 3 summarizes key differences in the learning environment attributable to the individualism dimension.

Table 3: Individualism Dimension: Learning/Teaching Implications:

China (Score = 15)	USA (Score = 91)
<ul style="list-style-type: none"> • Indirect communication • More context-based communication • Low or subtle feedback • Relationship oriented 	<ul style="list-style-type: none"> • Direct communication • More content-based communication • High or required feedback • Task oriented

Long-Term Orientation. Hofstede's dimension of long-term orientation represents the degree to which a culture is oriented toward future rewards rather than short-term rewards. High scores on the dimension of long-term orientation indicate a culture that respects tradition and long-term commitments and fosters virtues oriented toward future rewards, such as perseverance and thrift. Cultures with low scores on the relativism dimension view tradition as an impediment to change. In general, high relativism, long-term oriented countries are Asian and low relativism, short-term oriented nations include Western or non-Asian.

Long-Term Orientation and Classroom Behavior. This cultural dimension contributes one primary factor to the dynamics between Chinese students and the American educational context in which they are studying. The long-term orientation of Chinese students means that view their educational experience in the U.S. as an investment. There is a clear understanding that they have come from China to gain a competitive advantage by studying in the American higher education system and they will return to China in order that the benefits of their education transfer to their home country rather than enter the US workforce (Trendowski, J. et al., 2019). Although they are going abroad to gain an education, they know that they will eventually return to China and 'pick up where they left off'. The long-term orientation implies that Chinese students will be hard working – difficulties are overcome through time, persistence, and strength – and failure within the educational system would be viewed as a loss of face. In contrast, U.S. culture has a short-term orientation. This may manifest itself in U.S. students with a short-term orientation whose commitment to educational outcomes is not as strong as that of Chinese students. A short-term orientation manifests itself in students focused on the attainment of a 'credential' rather than an 'education' to quickly move into the workplace.

In summary, the long-term orientation dimension tends to re-emphasize the same attributes of Chinese students at American universities as the other two cultural dimensions in that students keep more of an emotional distance from the educational process knowing in a relatively short time it will end. Additionally, international students network primarily with co-nationals, due to the relative comfort and ease (Tang et. al., 2018). This in turn will produce low class interaction and involvement with a similar perception of passivity. Table 4 summarizes the key differences in the learning environment due to the long-term orientation dimension.

Table 4: Long-Term Orientation Dimension: Learning/Teaching Implications

China (Score = 114)	USA (Score = 29)
<ul style="list-style-type: none"> • Long-term orientation • Perseverance • Relative, adaptive • Asian synthesis 	<ul style="list-style-type: none"> • Short-term orientation • Quick results • Absolute, preconceptions • Western analysis

Methodology

This study seeks to develop insights into Chinese student behavior in American classrooms. We utilize an inductive interpretivist approach (Miles & Huberman, 1994) using eight in-depth interviews of Chinese graduate students pursuing a MBA in the United States.

The study took place in the United States. Each of the subjects was a current or former student of the authors. The study consisted of four males and four females who were provided with a series of questions (appendix A) to gain insight into the challenges of a Chinese national studying in the United States.

The interviews were conducted using open-ended questions distributed via email after receiving the subject's consent. Every student that was contacted agreed to participate. All participants were guaranteed anonymity and given the opportunity to see the subsequent findings.

Interpretation

Interaction

Except for one student, all Chinese students had never visited the United States prior to attending a university. That student spent two years of high school in the United States. Comparatively, she had more diversity in her friends, which were described as a large group of international backgrounds. Comparatively, the students who had arrived in the US to attend classes tended to have a much higher percentage of fellow Chinese friends. Universally, those students began to interact with a wider range of individuals as their time in the US increased. It was common that student responses indicated that the native English speakers were extremely helpful and friendly, but it often took the initiative of the Chinese student to ask for help. From the student perspective, it was essential to ask for help when needed, rather than wait for assistance. This leads to an opportunity for faculty to regularly engage the relatively inactive student as he or she may require assistance but reluctant to ask for it.

Language

On a scale of one to five rating English competency, the subjects generally ranged from three to five. As such, the students were able to understand the spoken language fairly well. As expected, the student's mastery of the language improved as the exposure increased. Although the number of courses in English helped (Li, Wang, Liu, Xu & Cui, 2018), it was group work that was often the biggest aid in conquering the language barrier. Many students mentioned working in groups as the most influential aspect of becoming truly fluent. One explanation may be that lectures are often one-way communication where the student can digest the information at a later point. Since group work is in real-time, the student must be able to understand the meaning and respond with a relevant response. The learning was further expediated by engaging in activities outside of the classroom. Therefore, those that elected to participate in extracurricular activities were able to assimilate much quicker in terms of language and interaction.

Classroom Behavior

Collectively, the group stated that their classroom interaction tended to be on the lower end. In many cases, the language difference was not the key indicator. Certainly, it is a factor as dialogue in a different language does not come as naturally. However, many students indicated that the Chinese culture influenced them in some way. In China, it is not common to talk or comment in class whereas this is the norm in many American colleges of business. The student expressed that previous courses back home were centered on the final exam. However, the US model placed more emphasis on projects, activities, and participation. Therefore, it may be beneficial to regularly reinforce the importance of all activities if the students have expectations of the final exam being the focal point of the course. Another significant adjustment was the expectation of presentations. This was difficult mainly for two of the reasons mentioned previously, different language and no past point of reference. When giving a presentation, students found it difficult to truly express what they were trying to say. In most cases, the focus was more

on the correct pronunciation rather than additional content. They would often try to present very structured, to eliminate opportunities for errors. Additional challenges arise because this is an activity that many Chinese students have never been part of. Even for domestic speakers, public speaking can cause some level of anxiety. When the experience and language are somewhat foreign, it is likely to add to the level of discomfort. Therefore, preparation, practice, and repetition should make presenting a more comfortable task.

Conclusion

With an increasing number of international Chinese students pursuing their education in the United States, faculty are often frustrated at their inability to effectively engage and integrate these students into the classroom. Chinese students often appear passive and unwilling or unable to engage in discourse. Cross-cultural and migration theories are used to explain such behavior as well as the observed behaviors associated with these theories. The theory of the cross-cultural psychology of migration suggests that Chinese students will adopt a strategy of separation since they will most likely return home after their studies. Accompanying the emigration experience are various acculturative stresses that explain in part observed behavior. The cross-cultural theory of management suggests three distinct differences between Chinese and domestic students and relates these differences to observed behaviors as well. In addition, the challenges Chinese students present in the classroom may also vary depending on their majors, since social science majors tend to demand higher level of English skills and knowledge of American culture. Understanding the origins of the student passivity provides a starting point to engage Chinese students more fully in the classroom. As the number of students arriving from China to the U. S. increases in the coming years, it is useful to think about ways in which these students can participate more fully in the education process.

Deliberate interaction among students of diverse backgrounds. Formal classroom discussion may be extraneous to students who have never learned in that environment. If a student is used to downward communication being the norm, he or she may not be comfortable engaging in classroom discussion among peers. Therefore, it is essential to encourage all students to interact with one another at various points in the course. This may come in the form of small group discussions or problem solving. More specifically, faculty should encourage all students to interact with diverse contemporaries on a regular basis. The limitation to working with the same people on a regular basis is groupthink. Having additional outside perspectives and shared experiences will encourage creativity and innovation in the classroom. By extension, cultural awareness and cultural intelligence for all students will likely be improved from these interactions. Subsequently, Chinese students' acumen in spoken English will also benefit. Although English courses contribute to understanding the language (Li, Wang, Liu, Xu & Cui, 2018), group work may be the biggest aid in its proficiency. One explanation may be that lectures are often one-way communication where the student can digest the information at a later point. Since group work is in real-time, the student must be able to understand the meaning and respond with a relevant response. The learning was further expediated by engaging in actives outside of the classroom. Therefore, those that elected to participate in extracurricular activities were able to assimilate much quicker in terms of language and interaction. Thus, the professor can further aid in the assimilation process by introducing several key migration and cross-cultural management techniques into the classroom

Ask questions directly to the Student. To minimize the barrier between faculty and student, one should consider making a conscious effort to engage the student in discussion. Traditionally, Chinese students are programmed to memorize course material without questioning or debating its merits (Gao & Ting-Toomey, 1998; Sit, 2013). Given the cultural expectations, the student may not want to challenge or confront a topic of debate. A welcoming invite into the conversation is an effective way to encourage reluctant students to be part of the conversation. Often class discussions are free flowing among the student peers. If an international student struggles with comprehension, or speed of interaction, calling on

that student will provide an opportunity to share his or her perspective. A secondary benefit will be that the question reduces barrier that may otherwise be perceived.

Reiterate classroom/course expectations. Many students become introverted when facing the unknown. If the course expectations are discussed only at the beginning of the semester, they may be forgotten over time. Regular engagement and interaction within the class is likely to keep students engaged and on task throughout the semester. Cultural maintenance (Chataway & Berry, 1989) for many Chinese students leads to a preference in participating in Chinese clubs and cultural events almost exclusively. In China, it is not common to talk or comment in class whereas this is the norm in many American universities. Many of the classes back home are focused on the final exam, thus diminishing any relevance of student/faculty interaction. In many cases, grades in US institutions also consist of participation, projects, presentations, and other experiential tasks. Therefore, some students have no point of reference for this criterion and may not appreciate its importance until later in the semester. The Chinese collectivist society has a high degree of interdependence with group members. However, the collaboration with no-group members (Triandis, 1989) often lacks in the classroom setting. Repetitious encouragement of non-group collaboration will serve as a reminder of the cultural expectation in the new country.

Offer support. Many of these students are spending their first significant time away from home. They are likely enduring other challenges besides the rigorous coursework. Kim (2012) mentions adjustments to foods, regulations, climate, transportation systems, banking systems, health care, among others. Educational differences (Kim, 2012), such as the expectation of giving a presentation, are compounded as the activity is not in one's native language (Chataway & Berry, 1989). Public speaking is a challenge for many students, so requiring it to be completed in a second language only makes it that much more difficult. Therefore, compassion and kindness might make a profound impact. Previous students have mentioned that native English speakers are extremely helpful, but it takes the Chinese student to initiate the discussion. Rather than waiting on that interaction, a proactive approach can bridge the cultural gap and provide an inclusive learning environment for everyone involved.

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Appendix A

Questions for Participants

- 1 Had you been to the United States prior to coming to an American college or university?
 - 2 On a scale of 1-5, how comfortable were you communicating in English when you arrived on Campus? (one = very uncomfortable; five = very comfortable)
 - 3 During your study, were most of your friends from your home country?
 - 4 What helped you become friends with students that were not from your native country?
 - 5 What was the biggest difference between Chinese and American style education?
 - 6 Did you participate a lot during class discussions? If you did not participate much, what do you feel was the biggest barrier?
 - 7 What was the hardest part to adjust to in the American educational system?
 - 8 Do you have any suggestions to help Chinese students assimilate into the American classroom?
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The Coronavirus Pandemic of 2020: Origins, Cost, and Policy Implications

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Abstract

The most prevalent thoughts on the coronavirus known to cause COVID-19 are reviewed to shed some light on responsibility for the world crisis. The true origin of the SARS-CoV-2 virus appears to be shrouded in uncertainty. Global costs for the pandemic are cited, estimated at \$24 trillion. Because the pandemic is ongoing, the cost data presented are estimates. New variants of the coronavirus continue to emerge, resulting in further economic losses, hospitalizations, and deaths. The price tags for vaccines, testing, and hospital admissions are highlighted. While SARS-CoV-2 is considered novel, viruses are not new. They have long coexisted in human populations. What is novel is how the world deals with the current coronavirus pandemic and how it prepares for future outbreaks. Policy recommendations that focus on recovery and prevention are provided for individuals, the international community, business enterprises, and vaccine developers.

Introduction

COVID-19 is a near ubiquitous disease that has shocked the world, killed 5.6 million people, infected more than 359 million individuals, devastated communities, and destroyed economies (Worldometer, 2022). These are the pitiful and consequential effects of a virus known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Coronaviruses are a large family of viruses. Several of them are known to cause respiratory diseases in humans ranging from the common cold to more serious diseases such as severe acute respiratory syndrome (SARS) and Middle East Respiratory Syndrome (MERS). Both have high mortality rates and were first detected in 2003 and 2012, respectively. The novel coronavirus responsible for COVID-19, according to numerous reports, is a mutation of the 2005 virus that resulted in the SARS epidemic. It emerged and infected humans sometime after November 2019. Very likely, it occurred because of an initial small-scale exposure, which evolved into a global pandemic. The first identified cluster of COVID-19 cases arose in Wuhan, China some time in December 2019 (Unclassified Intelligence Community Report, 2021).

Notwithstanding the lack of substantial scientific explanations for the cause, it is worthwhile to understand some of the effects of the global COVID-19 pandemic. Those effects impact the world's systems of health care, labor, defense, and business. Focusing only on the human side, the COVID-19 pandemic has resulted in a global loss of 5 million lives. It has taxed almost everyone in the health care system to near exhaustion. The tremendous loss of life and the countless millions of patients infected by the virus and subjected to pain and suffering make up what is likely the highest monetized cost of COVID-19.

This paper aims to highlight some of the effects of COVID-19, discuss its viral origin, summarize the costs of the pandemic, and recommend policies for the future. It is organized into three sections. The first deals with the origins of the coronavirus, examining the positions of the United States and the World Health Organization (WHO). The second focuses on some of the tangible costs unnecessarily borne by the world in the effort to deal with the ravages of COVID-19. The third suggests a path on which to move

forward Policies are recommended for individuals, the international community, business enterprises, and vaccine developers on what ought to be done to best manage the current and future pandemics

Origin of the Novel Coronavirus

In this section we discuss the foundation upon which the policy recommendations for recovery are based Several of the prevailing hypotheses for the origin of the novel coronavirus will be highlighted Understanding the origin of the virus is not simply an academic exercise It is, in fact, the basis on which strategies for prevention and mechanisms for outbreak management can be formulated

It is important for the public and scientists to know about the origins of the coronavirus that causes COVID-19 Dr. Peter Ben Embarek, Danish food scientist and program manager at the WHO, provides three key reasons First, if the source of the virus is found, steps can be taken to prevent future reintroduction of the same virus into the human population Second, if scientists can understand how the SARS-CoV-2 virus moved from its origin in bats to humans, similar events can be prevented in the future This could prevent future similar pandemics. And third, if it could be determined what the virus resembled before it jumped into the human population, more efficient treatments and vaccines for COVID-19 could be developed (WHO Episode #21 Podcast Transcript, 2021).

Understanding the origin of the coronavirus is important because it facilitates a discussion of culpability and liability If SARS-CoV-2 can be traced to the Wuhan Institute of Virology and the outbreak found to be caused by a negligent accident, then it could be argued that China should bear the costs of providing reparations to the world Conversely, if the evidence shows that the virus spilled over from animals into humans in contact with the Huanan Seafood Market in Wuhan and Chinese officials did not have foreknowledge of SARS-CoV-2 before it was isolated in the general population, then it could be argued that China should not be liable for the damages experienced by the world Thus, understanding the origin of the coronavirus is critical to assessing liability, i.e., who pays for what happened

In the January 2021 WHO podcast, Embarek discussed a mission that deployed to Wuhan in late January to study the origin of the coronavirus The mission was staffed by a team of 10 international experts comprised of veterinarians, medical doctors, epidemiologists, and virologists who collaborated with their Chinese counterparts on various studies designed to better understand the novel coronavirus Among other things, Embarek commented on the claims that the coronavirus originated in a laboratory setting He indicated that after scientists examined the COVID-19 virus, nothing was found in its makeup indicating that it had been manufactured He claimed that SARS-CoV-2 was a naturally occurring virus, one of many found throughout the world No evidence had yet been found to indicate that it escaped from a laboratory in any way (Maxmen, 2021b)

In this discussion on the origin of the coronavirus known to cause COVID-19, it should be kept in mind that “where an epidemic is first detected does not necessarily reflect where it started” (WHO-Convended Global Study of the Origins of SARS-CoV-2, 2020, p. 2) The outbreak of pneumonia of unknown etiology was noted in Wuhan, but the possibility that the virus may have circulated elsewhere cannot be discounted Some countries have retrospectively identified cases of COVID-19 weeks before the first case was officially notified through surveillance in Wuhan and unpublished reports of positive sewage samples suggest that the virus may have circulated undetected for some time (WHO-Convended Global Study of the Origins of SARS-CoV-2, 2020)

The U.S. Perspective

In August 2021 the U.S. Intelligence Community (IC), made up of 18 organizations including the FBI, CIA, DEA, nine defense agencies, the Department of State, the National Reconnaissance Office, and

several other units of government, furnished President Joe Biden with a report on the origin of the virus that causes COVID-19. The unclassified two-page summary of the report makes two important assessments: First, it states that the agencies of the IC are divided on the most likely origin of COVID-19; and second, it states that the agencies of the IC are unified on accepting two hypotheses to explain the origin of COVID-19. The two hypotheses are (1) a natural exposure to an infected animal and (2) a laboratory-associated incident. Analysts at the IC agencies are unable to coalesce around either explanation without additional information. The IC states that they are unable to provide a more definitive explanation as to the origin of COVID-19 unless information allows them to determine the specific pathway for initial natural contact with an animal or to determine that a laboratory in Wuhan was handling SARS-CoV-2 or a close progenitor virus before COVID-19 emerged (Unclassified Intelligence Community Report – Director of National Intelligence, 2021).

According to its report, the IC and the global scientific community lack clinical samples or a complete understanding of the epidemiological data from cases involving the early COVID-19 infections. It needs information on the earliest cases that identify a location of interest or occupational exposure. Having this information would enable the IC to alter its evaluation of the two prevailing hypotheses. Aside from the August 27, 2021 unclassified summary, the full report of the IC on the origin of the coronavirus was not released for public scrutiny.

A more comprehensive report entitled “Updated Assessment on COVID-19 Origins” was released by the IC on October 29, 2021, more than two months after the two-page summary document was issued. Like the summary, the full report lacked finer details of what the IC assessed. However, the report is clear on the following points:

1. China did not develop SARS-CoV-2 as a biological weapon.
2. SARS-CoV-2 was not genetically engineered. This is based on technical analysis of the coronavirus and the IC’s growing knowledge of the characteristics of the virus as well as its potential for recombination in other coronaviruses.
3. The first known cluster of COVID-19 cases emerged in December 2019 in the city of Wuhan, China. The IC indicates that it lacks insight – and they may never have it – on where the initial SARS-CoV-2 infections occurred.
4. China’s officials most likely did not have foreknowledge that the SARS-CoV-2 coronavirus existed before researchers at the Wuhan Institute of Virology isolated it. This occurred because of public recognition of the virus in the general population. It was argued that if the pandemic resulted from a laboratory-associated event, Chinese officials were unaware in the initial months that such an event occurred (Director of National Intelligence, 2021).

After the release of the August 27 unclassified summary COVID origins report, President Biden issued a statement indicating that the United States would continue to trace the origins of COVID-19. In it he condemned China for the country’s failure to cooperate and he pressed Chinese officials to provide fuller cooperation with the WHO’s phase-two investigation. At a news conference soon afterwards, Zeng Yixin, the vice-minister of the Chinese national health commission, said that scientists in China were following the leads suggested in a March 2021 report by the World Health Organization. In addition, he “welcomed a WHO-led phase-two investigation that includes tracing the history of the first people now known to have had COVID-19, and studies in multiple countries on animals that might have served as intermediary hosts, transferring the virus from, say, bats to humans” (Maxmen, 2021a).

The World Health Organization’s Perspective

The position of the United States, through its Intelligence Community, seems to run contrary to the information published in a World Health Organization (WHO) report from February 28, 2020. That

comprehensive forty-page report summarizes the known facts about the coronavirus known to cause COVID-19. The facts were established by a Joint Mission consisting of 25 national and international science experts from China, Germany, Japan, Korea, Nigeria, Russia, Singapore, the United States of America, and the World Health Organization Among other things, the WHO report discusses:

Origins: COVID-19 is a zoonotic virus, which means that the virus lives naturally in an animal and can infect human cells, perhaps mutating as it passes from animals to humans, enabling the virus to start a chain of infection through human hosts The WHO contends that bats appear to be the reservoir of the COVID-19 virus, with the intermediate hosts not yet identified (Joint Mission WHO report, 2020) A March 26, 2020 WHO report on the origin of SARS-CoV-2 states that all the novel coronavirus “isolated from humans to date are closely related genetically to coronaviruses isolated from bat populations, specifically, bats from the genus *Rhinolophus*” (WHO, Origin of SARS-CoV-2, 2020) Since there is usually very limited close contact between humans and bats, it is believed that transmission of SARS-CoV-2 to humans occurred through another intermediate host That host is most probably another animal more likely to be handled by humans That intermediate animal host might be a wild animal, domestic animal, or a wild animal that has been domesticated, which has not yet been identified

Routes of Transmission: COVID-19 is transmitted via droplets and fomites during close unprotected contact between an infector and a person who becomes infected

Contact Tracing: Contact tracing in China is a national policy It is meticulous and thorough In Wuhan alone, tracing is carried out with more than 1800 teams of epidemiologists consisting of a minimum of five people per team In Shenzhen City, 100% of 2842 identified close contacts were traced and 79% of those completed medical observation 3.1% were found to be infected with COVID-19 In Sichuan Province, among 25493 identified close contacts, 99% were traced and 91% have completed medical observation 0.9% were found to be infected

Household Transmission: In China, human-to-human transmission of the virus occurs largely in families Among 344 clusters involving 1308 cases of 1836 reported in Guangdong and Sichuan Provinces, most clusters (78% - 85%) occurred in families

Susceptibility: Since COVID-19 is a pathogen that has only recently been identified, there is no known pre-existing immunity in humans Based on the epidemiological experience in China, everyone is thought to be susceptible However, there may be risk factors that increase infection susceptibility There may be neutralizing immunity after a person becomes infected

Signs and Symptoms: Symptoms of COVID-19 are non-specific – the disease can manifest itself with no symptoms (asymptomatic) to severe pneumonia and death As of February 20, 2020, based on 55924 laboratory confirmed cases, signs and symptoms typically observed were fever, dry cough, fatigue, sputum production, shortness of breath, sore throat, headache, myalgia, chills, nausea or vomiting, nasal congestion, diarrhea, hemoptysis, and conjunctival congestion Most people (80%) suffering with COVID-19 have mild disease and recover 13.8% have severe disease (dyspnea, respiratory frequency greater than 30/minute, blood oxygen saturation levels less than 93%, and/or lung infiltrates involving more than 50% of the lung) 6.1% have critical levels of disease (respiratory failure, septic shock, and/or multiple organ dysfunction/failure)

Based on 55,924 laboratory confirmed cases on February 20, 2020, a total of 2,114 people have died, representing a crude fatality ratio (CFR) of 3.8% The mortality rate increases with age with the highest being in people over 80 years of age This group has a CFR of 21.9%.

Response: Once a cluster of pneumonia cases of unknown etiology was detected in Wuhan, the Chinese government launched a three-stage response

In the first stage, which occurred at the outbreak of the epidemic, the strategy focused on preventing the exportation of cases from Wuhan. The aim of this stage was to control the source of the infection. The WHO was informed of the epidemic on January 3, 2020 and genome sequences were shared with the WHO on January 10.

In the second stage of the outbreak, the main strategy was to decrease the intensity of the epidemic. The focus was to slow down the increases in cases. Strict traffic restrictions were implemented in Wuhan on January 23, 2020. Measures were taken ensuring that all known cases were treated. Close contacts were isolated and observed medically. Efforts were devoted to ensure a stable supply of commodities along with price controls to maintain the smooth operation of the economy.

In the third stage of the outbreak, the focus was on reducing clusters of cases, managing the epidemic, and balancing prevention and control. Attention was given to maintaining sustainable economic and social development, the unified command, standardized guidance, and science-based policy implementation.

Assessment: In the opinion of the Joint Mission of the WHO, China has engaged in the most ambitious, aggressive, and agile disease containment effort in history. The strategy employed that underpinned its containment effort was a national approach. There has been a constant refinement of specific aspects of the strategy to incorporate new knowledge on the novel coronavirus and COVID-19 disease. At the individual level, the people of China have shown courage and conviction in dealing with the COVID-19 outbreak. The Joint Mission believes that much of the global community is not yet ready materially or in mindset, to implement the strategies employed by China to contain COVID-19 (WHO-China Joint Mission Report, 2020).

Discussion of the Perspectives

The Embassy of the People's Republic of China released a statement commenting on a February 25, 2020 press conference. The Embassy referenced the comments of Bruce Aylward, head of the World Health Organization's expert team and senior advisor to the Secretary General of the WHO. Aylward stated that China "has taken ambitious, flexible, and bold efforts in responding to the epidemic" (China Embassy, 2020). He contended that China has engaged in an unprecedented public health response to the COVID-19 outbreak that has yielded notable results in blocking transmission of the virus between humans. This response has prevented or delayed hundreds of thousands of cases. It is his belief that China has played an important role in protecting the health of the international community (China Embassy, 2020).

The Chinese government has been critical of the assessment on the origins of COVID-19. In an August 30, 2021 press conference, Foreign Ministry Spokesperson Wang Wenbin asserted that Vice Foreign Minister Ma Zhaoxu and Vice Minister of the National Health Commission Zeng Yixin have both stated China's position on the U.S. Intelligence Community's assessment report on the origins of COVID-19. They claim that the "so-called IC assessment on COVID-19 origins is a political report that runs counter to science, a scapegoating report that shifts the responsibility for the botched U.S. response under the guise of origins study, and a false report that smears China with fabricated pretenses. This assessment is another testament to how the U.S. seeks to mislead and deceive the international community just like the lie it spread alleging that Iraq possessed weapons of mass destruction" (China Embassy Press Conference, 2021, p. 3). Among other things, Spokesperson Wang Wenbin asks why the United States enlisted intelligence agencies to study the origins of the coronavirus that caused COVID-19 instead of scientists. This is a legitimate question. He posits that perhaps the U.S. is not so much attempting to find the truth as fabricate the "truth."

The Chinese government is also critical about the actions undertaken by the U.S. government Spokesperson Wang Wenbin states that after the COVID-19 outbreak, the U.S. withdrew from the World Health Organization at a crucial juncture, banned export of vaccines when the world was in urgent need and undertook a campaign to advance the lab leak hypothesis after China and the World Health Organization had successfully conducted the first phase of the origins study He charged that this action has created a fiasco in United States' response to the pandemic, which took a heavy toll on the American people He asserts that it severely poisoned the atmosphere for international cooperation in tracing the origin of the SARS-CoV-2 He maintains that the U.S. has become a disruptive factor in joint international efforts to combat the virus and the greatest obstacle in science-based origins tracing (China Embassy Press Conference, 2021) Wenbin states:

In the face of the pandemic, the wellbeing of all countries is closely linked We need science, solidarity and cooperation to win this fight China is committed to cooperation in combating the virus and science-based origins study and rejects the wrong approach of politicizing efforts on these two fronts We stand ready to work together with all countries for an early victory We urge the U.S. to value life, respect science and stop playing the game of blame-shifting disguised as origins tracing, and return to cooperation and science in fighting the pandemic and tracing the origins (China Embassy Press Conference, 2021, p. 3).

The assertion by the Chinese government that the U.S. has withdrawn from the World Health Organization is patently untrue On January 20, 2021, immediately after being sworn into office, President Joe Biden took executive action “to cease the previous Administration’s process of withdrawing from the World Health Organization – an entity that is critical to coordinating the international response to COVID-19, advancing preparedness for future epidemics and pandemics, and improving the health of all people” (The White House, 2021, p. 3-4) While the Trump Administration threatened to withdraw its membership in the WHO and redirect funds to US global health priorities on July 6, 2020, that action would not have occurred until July 2021 It was a threat considered by many to be reckless and unlawful because simply withdrawing from the WHO cannot be done without the express approval of Congress It could be argued that withdrawing from the WHO would have had dire consequences for the diplomacy, security, and influence of the United States The threat, however, remained viable until January 21, 2021 after which time it was effectively nullified by Joe Biden’s executive action (Gostin, 2020).

In its Updated Assessment on COVID-19 Origins, the intelligence community softened its position on China’s culpability for the COVID-19 pandemic. This is a welcome change because during the administration of former president Donald Trump, several state department officials including secretary of state Mike Pompeo argued, “the virus was the product of Chinese government manipulation, and a potential biological weapon” (Maxmen, 2021a). The April 2021 Updated Assessment explicitly states that the SARS-CoV-2 virus was not developed as a biological weapon nor was it genetically engineered. It clearly stated that China’s officials were unaware of the virus before the pandemic emerged. However, it does not dismiss the possibility that the SAR-CoV-2 virus was initially introduced into the human population as a result of a laboratory-associated incident (Director of National Intelligence, 2021)

In sum, there appears to be ample evidence that the question on where the virus causing COVID-19 originated has been politically fraught from the start Both China and the U.S. have engaged in accusations about who is conducting the studies on origin of the coronavirus, who is thwarting progress on understanding the virus and its origin through action or inaction, why there is a lack of transparency to reveal the truth about the virus, and why each side appears to be blaming each other for causing the pandemic Despite the fact that COVID-19 is a public health issue, it has been politicized This may have overshadowed the search for answers Unintentionally, the WHO contributed to the problem because it seems to have regarded its work “as a diplomatic mission and not as an independent scientific

investigation into all possible sources,” according to Nikolai Petrovsky from Flinders University in Adelaide, Australia (Mallapaty, 2021, p. 338)

On the question of who is thwarting progress to understand the origin of COVID-19, it has been pointed out that China has opened its country to allow a team of scientists to conduct investigations. Some say that this openness was unusual. “If you consider other highly industrialized countries, I am not sure they would,” says David Heymann, an infectious disease epidemiologist at the London School of Hygiene and Tropical Medicine (Mallapaty, 2021, p. 338)

Given the politics and the unanswered questions, scientists wonder if the origin of COVID-19 might forever remain elusive. Filippa Lentzos, a biosecurity researcher at King’s College London believes that the WHO team members on the mission to investigate the origin of the virus did not have the required background to investigate a biosafety breach. As such, the origin might forever be shrouded in uncertainty. She asserts, “I seriously doubt we’ll find a smoking gun. There won’t be an undisputable origins answer. All we’ll have are likelihoods and probabilities” (Mallapaty, 2021, p. 338)

Costs to Effectively Manage the Pandemic

This section of the paper explores some of the costs borne by the world community to manage the COVID-19 pandemic. If the analyses on origin of the coronavirus were conclusive and liability for causing the pandemic could be leveled against an entity or a country, having information about the costs of the pandemic would be helpful. Since the origin of SARS-CoV-2 cannot be clearly established, it seems reasonable that the global cost of the pandemic should be shared – in a fair manner. Countries with more resources should bear a larger burden. Those with less, should be supported and shielded from excessive losses and public health costs.

In a study by Barai and Dhar (2021), several costs of the COVID-19 pandemic were identified: human, economic, trade, employment, social, and environmental costs. Interestingly, these researchers note that COVID-19 may have had some positive effects. The pandemic likely helped societies mend some of the injuries intentionally or unintentionally inflicted on the planet. It may also have brought many human qualities back into people’s everyday stressful lives.

According to Szmigiera (2021), many governments are increasing their monetary benefits to citizens and ensuring businesses have access to assistance funds needed to keep their staff employed throughout the pandemic. Some sectors of the economy may benefit from the pandemic. Specifically, e-commerce, food retail, IT, and the healthcare industries have realized some economic growth, which offsets the damage experienced in other sectors of the economy.

There is no way to tell exactly what the economic damage from the global COVID-19 pandemic will be. However, there is agreement among economists that it will have severe negative impacts on the global economy. It is predicted that most major economies will lose a significant portion of their gross domestic product (GDP). To provide some perspective, it is estimated that the global GDP in 2020 is around \$84.54 trillion US dollars. The forecasted change in global GDP due to COVID-19 in 2022 is estimated at 4.5 percent. This translates into \$3.80 trillion US dollars of lost economic output (Szmigiera, 2021)

The cost of the pandemic is high and quickly rising if one examines it from a macroeconomic viewpoint. From what governments admit, the rescue measures instituted around the globe added about \$24 trillion US dollars to the 2020 global debt obligation. This increased IOUs to a record \$281 trillion dollars (Jones, 2021; Pesek, 2021)

Based on data obtained through December 31, 2021, the U.S. spent \$4.12 trillion dollars in response to the COVID-19 pandemic. This is the total obligation to date derived from funds appropriated by the U.S. Congress in early 2020. These funds were enabled through legislation known as Coronavirus Aid, Relief, and Economic Security (CARES) Act and other supplemental legislation. Supplemental funding was appropriated through the American Rescue Plan Act (USA Spending, 2021).

What follows is a discussion of the costs of the pandemic from a microeconomic perspective. This section of the paper will consider three specific healthcare costs: vaccines, COVID-19 testing, and hospitalizations.

Vaccines

The global effort to develop a safe and effective vaccine began once the pandemic was officially announced. The accelerated pace at which the vaccines were developed was unprecedented because the process typically takes eight or more years. Development costs for these vaccines were borne by governments, multilateral organizations, and private firms. Those costs amounted to billions of dollars. To date more than two dozen vaccines, including ones by Pfizer, Moderna, and Sinopharm, are already in distribution. Approximately half of the global population has been vaccinated (Felter, 2021).

In the aggregate, vaccinating the world for COVID-19 is projected to cost \$157 billion over the next five years, driven by mass vaccination programs and booster shots expected at periodic intervals (Mishra, 2021). The largest cost – \$54 billion – would occur in 2021. It is projected to decrease afterwards to \$11 billion in 2025 as increased volumes and competition drive the price of vaccines down. According to some, this cost is a “very small price to pay relative to the human cost of the pandemic” (Mishra, 2021, p. 4). One estimate, likely only for a first dose, suggests the price tag for world-wide vaccination coverage would be as little as \$50 billion – an amount that would likely save the global economy (Horobin, 2021). It would help end the pandemic and tackle the imbalances “plaguing the recovery,” according to OECD economist Laurence Boone. The G20 countries have spent approximately \$10 trillion in their effort to mitigate the economic impact of COVID-19. In a Bloomberg Television interview Boone puts the issue into perspective: “When you balance things out, \$10 trillion for supporting the economy going through the pandemic compared with a tiny \$50 billion to bring the vaccine to the entire world population, that looks completely disproportionate” (Horobin, 2021).

With COVID-19 vaccines now becoming commonplace and people benefitting from them, it is important to ensure that the poorest countries of the world receive access to vaccines. Experience has shown that national governments, in response to previous pandemics, do not necessarily pursue a globally coordinated approach. They tend to pursue their own interests. If countries push to get first access to the vaccine supply or hoard components necessary to produce vaccines, a phenomenon called “vaccine nationalism” occurs (Hafner, Yerushalmi, Fays, Dufresne, and Van Stolk, 2020).

An international collaboration known as COVAX, which is a cooperative effort between the WHO and institutions from around the world, is working to provide equal access to vaccines globally. They do so by pooling resources. Unfortunately, there has only been weak commitments from wealthier countries. This is short-sighted because research shows that for every \$1 spent on supplying poorer countries with vaccines, high-income countries obtain a return of approximately \$4.80. Estimates by Oxfam International in 2020 show that it would cost \$25 billion to supply vaccines to lower-income countries. The US, UK, EU, and other high-income countries combined could lose about \$119 billion annually if those poorest countries are denied a supply. The data clearly show that the investment in vaccine development and equitable distribution would be economically beneficial in the long run. However, the investment and effort to support vaccination distribution must be sustained. It must extend beyond most short-term political cycles.

and focus on long-term aspirations not only for economic development, but also for the health of the global population (Hafner, Yerushalmi, Fays, Dufresne, and Van Stolk, 2020)

While it is important to work cooperatively to insure the equitable and efficient global distribution of vaccine, it is also important to monitor what pharmaceutical companies are charging for their products. In its policy brief, The People's Vaccine Alliance, a global movement of organizations, world leaders and activists, asserts that funding for the COVID-19 vaccine has been largely provided by the public. Moderna and Pfizer/BioNTech received \$8.25 billion in public support for their vaccines. Moderna received \$5.75 billion and Pfizer/BioNTech received 2.5 billion, which includes public funding and guaranteed government pre-orders (Oxfam International, 2021). Vaccines have now been privatized and monopolized, allowing pharmaceutical corporations the power to charge excessive prices on their products to maximize profit (Marriott and Maitland, 2021).

Table 1 - Leading COVID-19 Vaccines

Country	Developer	Price/dose in USD
China	Sinopharm	\$19 to \$37.50
China	Sinovac	\$10.30
India	Bharat	\$2.03 to \$16.00
Pakistan	CanSino	\$27.15
Russia	Gamaleya	\$20
Russia	Sputnik V	\$9.95 to \$27.15
United Kingdom-Sweden	Oxford-AstraZeneca	\$2.03 to \$7.95
United States-Germany	Pfizer-BioNTech	\$6.75 to \$39
United States	Johnson & Johnson	\$10 to \$14.50
United States	Moderna	\$15.40 to \$76

Source: New York Times, Reuters, Washington Post, Sky News, and Wall Street Journal

Table 1 provides a summary of the pricing information for global producers of COVID-19 vaccines. The data include the developer, country, and price per dose. At times a price range is shown for the vaccine because pharmaceutical companies have a complicated system of pricing. The criteria used to set price is not entirely public. Some factors used by pharmaceutical companies to price their COVID-19 vaccines include number of vials purchased, country signing the contract, whether there was a lump sum payment, and whether the developer was supported in its research efforts.

Analysis by The People's Vaccine Alliance shows that Moderna and Pfizer/BioNTech have charged governments as much as \$41 billion above the estimated cost of production. Those two companies have sold over 90% of their vaccines thus far to rich countries, charging up to 24 times the potential cost of production. While Pfizer/BioNTech indicated that it would license a company in South Africa to fill and package 100 million doses of vaccine for use in Africa, this is a mere drop in the bucket. Neither Pfizer nor Moderna have agreed to transfer vaccine knowledge and technology with any capable producers in developing countries – a “move that could increase global supply, drive down prices and save millions of lives” (Oxfam International, 2021, p. 1). The pricing and production policies of pharmaceutical companies, according to some, is usurious and immoral. Anna Marriott, health policy manager at Oxfam International, says that these drug companies “are holding the world to ransom at a time of unprecedented global crisis. This is perhaps one of the most lethal cases of profiteering in history” (Oxfam International, 2021, p. 1).

COVID-19 Testing

In March 2020 the WHO sent a clear message to all countries in the world: test, test, and test. As the number of COVID-19 tests are increased, it becomes easier to track the spread of the virus and thereby reduce transmission. Many countries followed that recommendation and identified a greater number of cases early in the pandemic. Infected individuals were isolated, which limited the spread of COVID-19 to others. Testing was supplemented by restrictions on travel, which were eased temporarily. Most recently, with the discovery of the Delta and Omicron variants of the coronavirus, international travel bans have partially been reinstated. Essential travel is allowed, but passengers must show evidence of a negative COVID-19 test (Elflein, 2022).

The technology used to test individuals for COVID-19 is varied. Several types of tests are available, and some are still being developed. In general, there are two kinds of tests. The first analyzes whether the virus is present and the second analyzes whether antibodies are present. A virus test establishes whether a person is currently infected. The most common way to determine if virus is present is with a polymerase chain reaction test (PCR). In many countries rapid antigen tests are performed for the purpose of mass testing. The second kind of test analyzes antibodies in a person's blood sample. It is sometimes called a serology test. The test aims to establish whether a person had been infected with SARS-CoV-2 virus at some point in the past and developed antibodies to help fight it. Antibody tests are helpful in identifying infections in people who are asymptomatic. This is critical because asymptomatic carriers can unwittingly contribute to the rapid spread of COVID-19 (Elflein, 2022).

It is difficult to assess the number of persons tested for COVID-19 globally because of the variations involved in data collection. Some countries report number of tests while others report the number of individuals who are tested. Frequently, a single individual may be tested for COVID-19 more than once.

Table 2 reports the countries whose cumulative number of COVID-19 tests exceed 50 million as of February 4, 2022. The data in the table indicate that the United States has processed approximately 784 million tests. It ranks highest in the world in terms of cumulative number of COVID-19 tests performed (Hassell, Mathieu, and Beltekian, 2020). It ranks seventh most tested per one million population among nations most severely impacted by the pandemic.

According to experts, there is a wide range in charges for a COVID-19 test. The Kaiser Family Foundation found that the cost of a test can range from \$20 to \$850 with the median cost being \$127. The Medicare reimbursement rate for a COVID-19 test is either \$51 or \$100, depending on the type of test selected. In general, the fragmented healthcare system in the United States leads to wide variability in medical costs, which includes the cost of COVID-19 testing (Sharfstein, 2021).

A July 2021 study by America's Health Insurance Plans, an industry trade group, indicated that COVID-19 tests on average cost \$130 when they are performed within an insurance company's network. When tests are performed out of the insurance company's network, they typically cost \$185. The study also found that seven percent of labs charged excessively for tests. In a press release, the trade group said "price gouging on COVID-19 tests by certain providers continues to be a widespread problem, threatening patients' ability to get the testing they need" (Tanner, 2022).

With approximately 800 million tests performed in the United States as of February 2022, and the average cost per test being \$127, the total price tag for COVID-19 testing is \$101.6 billion dollars. The countries listed in Table 2 performed approximately 3735.6 million tests. Using the same cost per test charge of \$127 for the countries listed in Table 2, which does not include all countries in the world, the total price tag for COVID-19 testing is \$474.3 billion dollars. Clearly, the two-year old coronavirus pandemic has fueled a lucrative test industry reaching nearly a half trillion dollars.

Table 2 - List of countries and cumulative number of COVID-19 tests

Country	Number of Tests (in millions)
United States	783.97
India	735.80
United Kingdom	441.60
Russia	259.77
France	234.83
Italy	173.76
China	160.00
Austria	145.77
Turkey	132.96
UAE	126.62
Germany	102.01
Spain	82.71
Brazil	67.20
Australia	61.49
Denmark	59.86
Greece	58.03
Canada	56.80
South Korea	52.45

Source: Hassell, Mathieu & Beltekian (2020) with data updates to February 4, 2022.

COVID-19 Hospitalizations

Governments, social welfare agencies, and health planners frequently use the number of people in the hospital with COVID-19 to gauge the severity of the coronavirus pandemic. They also use hospitalizations as an inverse measure of success in managing the crisis. However, focusing on hospital admissions may not accurately describe the situation in the pandemic's current stage of development. The Omicron era has manifested itself with more patients infected with the virus who are being admitted to the hospital for reasons other than COVID-19. Data from New York state reveals that 42% of patients admitted to the hospital with COVID-19 were incidental cases, i.e., individuals admitted for other reasons who are found to be infected during routine testing. Viewing hospitalization data does not differentiate between individuals entering the hospital because of COVID-19 and those who test positive in wards during routine checks (Laudette and Smout, 2022).

Understanding the cost of COVID-19 hospitalizations is complicated because the disease affects people differently. Some people are only mildly affected and can treat themselves at home or with outpatient assistance. Others are more severely affected and require hospitalization or even admission to a hospital's intensive care unit (ICU). Once admitted, the common denominator that affects the cost of a patient's hospitalization is his/her length of stay. Other factors that affect cost include type of hospital, geographic location, vaccination status, and underlying conditions.

Because countries throughout the world differ on whether hospitalization data is reported, how it is aggregated, what information is provided to central tracking agencies, and how health care is practiced, the remainder of this section will focus solely on the US experience. Number of COVID-19 admissions, deaths, and hospitalization costs will be highlighted.

Recent data published by the Center for Disease Control and Prevention (CDC) indicate that there are fewer COVID-19 cases, hospitalizations, and deaths for the week ending February 2, 2022, as contrasted with the previous week. These are encouraging indications that the effect of the Omicron variant is diminishing. In its weekly review, the CDC reported that the total number of new hospital admissions for COVID-19 was 4,317,917 based on counts that began on August 1, 2020. The CDC also reported a total of 892,442 COVID-19 deaths in the United States, which is the highest number of any country in the world.

To understand the overall monetary costs of COVID-19 hospitalizations in the US, it is necessary to estimate hospital charges. According to FAIR Health, a national, independent nonprofit organization dedicated to bringing transparency to healthcare costs, the median estimated allowed amount for a COVID-19 ICU hospitalization is \$70,098; for a general hospitalization it is \$25,188; and for non-hospitalization (outpatient treatment) it is \$893. The non-hospitalization category typically includes laboratory tests, radiology, office visits, and cardiography procedures. The allowed amount is the total amount paid to an in-network provider – which includes payments from both the patient and the insurance plan (FAIR Health, 2021).

The total cost in the US for COVID-19 hospitalizations can be conservatively estimated using the CDC data on new admissions and the FAIR data on estimated allowed hospital charges. Approximately 22% of the hospital admissions for COVID-19 are to intensive care units. So, an estimate of the total COVID-19 hospitalization costs can be calculated as follows:

$$COST = [(x)(z)(a)] + [(y)(z)(b)]$$

where:

x = percent of COVID-19 ICU admissions

y = percent of COVID-19 general admissions

z = total number of COVID admissions

a = average allowed cost of a COVID-19 ICU admission

b = average allowed cost of a COVID-19 general admission

$$\begin{aligned} COST &= [22\% \times 4,317,927 \times \$70,098] + [78\% \times 4,317,927 \times \$25,188] \\ &= \$151,145,465,320 \end{aligned}$$

This calculation indicates that the total estimated cost of the pandemic in terms of hospitalizations in the US is \$151 billion dollars. While the number of COVID-19 hospitalizations is decreasing and outcomes are improving over time, the financial cost of the pandemic is a tremendous burden on people and on the economy. Vaccines, discussed in another part of this paper, have the potential to keep individuals from contracting COVID-19 and it can keep those individuals from needing hospitalizations. The cost for hospitalizing people affected by the pandemic is extremely high, but for patients with Long COVID, the cost is even greater. The reason is that these patients typically need follow-up medical care, which adds additional costs.

Long COVID, also known as post-acute COVID-19, is a term that describes symptoms that last for weeks or months beyond the onset of the initial viral illness. It is characterized by shortness of breath, difficulty with concentration, fatigue, sleep disorders, fever, anxiety, and depression (Longo, 2021).

The estimated U.S. expenditure for hospitalizations shown above does not include the costs associated with treating LC. Precise data on the number of individuals afflicted with LC and the sums of money they and their insurance carriers expended to treat the disease is uncertain. Suffice it to say that the costs of treating COVID-19 and one of its sequelae, known as LC, is astronomical. Health care costs in general are expensive. In terms of COVID-19, those costs can be decreased through prevention – through vaccinations – which can save life, health and money. In the words of Dr. Aftab Khan, board-certified specialist in internal medicine, “vaccine is free, hospitalization is not” (McDaniel, 2021).

Implications for National and International Recovery Policy

This section of the paper aims to take a forward look at the pandemic caused by the SARS-CoV-2 virus. Because the costs involved in preventing, testing, and treating COVID-19, its sequelae, and its variants are astronomical, and because culpability for the outbreak cannot be positively attributed to a single country, it is important to plan for another coronavirus pandemic in the future. The U.S. was not well prepared for the SARS-CoV-2 pandemic. Among other things, it needs to be more self-reliant in key industries such as pharmaceuticals, medical equipment, and protective supplies so that delays and shortages can be avoided. To plan for possible future pandemics, the following policies are recommended:

For the general public –

1. Adopt and rigorously practice the most important measures aimed at preventing COVID-19 by engaging in frequent hand washing and covering the nose and mouth when sneezing or coughing.
2. Aggressively support COVID-19 response measures in many and different ways. Examples include adopting more stringent social distancing practices and assisting people who are old and infirm.
3. Realize that it is necessary to continually educate oneself on COVID-19 and its symptoms such as dry cough and fever. This is important because responses and strategies for addressing aspects of COVID-19 are constantly improving as new information about the disease continues to accumulate daily (WHO – Report of the WHO-China Joint Mission, 2020).

For the international community –

1. Recognize and operationalize the collaboration and solidarity between nations that is essential to effectively deal with the common threat posed by COVID-19 and other similar diseases.
2. Share information on pandemic-related developments as required under the International Health Regulations including information on imported cases. This would assist in contact tracing and containment measures that span countries.
3. Recognize COVID-19’s rapidly changing risk profile and monitor trends and control capacities. Assess and reassess any health measures that may interfere with international travel and trade (WHO – Report of the WHO-China Joint Mission, 2020).

For business enterprises –

1. Plan for the reformulation of supply chains to ensure that drugs, equipment, food, and other societal goods are available when needed. The supply chains should include newer big, small and regional countries that will benefit from industrial relocation. This would involve identifying those countries and developing the necessary business interests.
2. Develop more governmental involvement with businesses in countries where industrial policy looks certain. The health sector, including pharmaceutical and medical supply companies, are likely to be supported by interventions from governments worldwide.
3. Develop realistic and beneficial rules for engagement with various business entities to ensure public acceptance (Barai and Dhar, 2021).

For Vaccine Developers –

1. Administer doses of COVID-19 vaccine to the unvaccinated before boosters are offered to ensure that every health worker and all people at greatest risk from the coronavirus are protected, everywhere. The governments of rich countries should mandate this temporary, but crucial, action.
2. Share and rapidly scale up vaccine know-how and technology. This effort should be accomplished through non-exclusive transparent licenses that are open to public scrutiny.
3. Improve the level of public financing for manufacturing capacity of vaccine in low- and middle-income countries so that they are never again left dependent on the goodwill of rich countries to access technologies that save lives in a pandemic (Marriott and Maitland, 2021)

Summary

This paper analyzed the outbreak of a novel coronavirus known as SARS-CoV-2, which was first identified in Wuhan, China in January 2020. The outbreak became a pandemic in March of the same year. Highlights of the path to uncover the origin of the virus were discussed. The coronavirus that causes COVID-19 was not weaponized and was not genetically engineered in a laboratory. Perspectives of the scientific and intelligence communities on how the virus may have moved from animals to humans were considered to determine if any one nation was culpable. Costs associated with the pandemic were discussed, including those related to vaccines, testing, and hospitalizations. Rescuing the world from the ravages of SARS-CoV-2 cost the global economy an estimated \$24 trillion US dollars. The paper concluded with policy recommendations for the U.S., individuals, the international community, businesses, and vaccine developers on how best to deal with future pandemics.

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An Exploration of the Relationship between the Availability of New Housing and the Formation of Immigrant Enclaves

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Abstract

Immigrant enclave described as geographical areas, wherein a community of immigrants can act in their Country of Residence (COR) as if in their Country of Origin (COO). The literature on immigrant enclaves suggests that enclave formation is frequently based on societal disadvantage or ethnic succession theories. However, findings from in-depth interviews within an immigrant community in Dublin (Ireland) suggest a new dimension to immigrant enclave formation. This article revisits literature on two of the most commonly used theories in defining immigrant enclave formation; it examines data set in-depth interviews from the study of an immigrant community in Dublin and uses a narrative analysis to explain a possible new explanation for ethnic enclave formation. Findings from the literature reviewed and the data set for this study highlighted that the redevelopment of an economic disadvantage area can through the availability of new housing can contribute to ethnic enclave formation.

Keywords: Immigration, ethnic enclave, cultural resources, demographic characteristics.

Introduction

In describing ethnic enclave formation, scholars and researchers have used theories such as labor market segmentation, societal disadvantage, ethnic succession and immigrant concentration theories to explain why immigrants are found in a specific geographical area in their new Country of Residence (COR) (Aldrich and Waldinger, 1990; Portes and Zhou, 1992; Burstein, Hardcastle, and Parkin, 1994; Light and Rosenstein, 1995; Bachkaniwala, Wright and Ram, 2001; Wrigley and Overman, 2010; Brenner, Menzies, Dionne and Filion, 2010). For decades, such concepts have been used to explain why and how immigrants and ethnic groups come together in a specific geographical area in their new COR. However, the data gathered on the formation of an ethnic enclave investigated for this study offers a different perspective from previous theoretical views on immigrant enclave formation and suggests a new explanation for their formation.

In many studies on immigrant enclave formation, two theories (e.g. ethnic succession and societal disadvantage) have been frequently used to define immigrant enclave formation. For example, the argument posed by ethnic succession theorists is that the failure of the native inhabitants of an area to replace themselves within that area creates an opportunity for immigrant enclave formation (Aldrich and Waldinger, 1990; Portes and Zhou, 1992; Brenner, Menzies, Dionne and Filion, 2010). Meanwhile, the disadvantage theorists are of the view that ethnic enclave formation frequently results from negative factors like linguistic barriers, discrimination in the labor market, qualifications attained in an immigrant's Country of Origin (COO) are not recognized in the COR or other disadvantages triggered by local society (Wilson and Portes, 1980; Burstein, Hardcastle and Parkin, 1994; Light and Rosenstein, 1995; Bachkaniwala, Wright and Ram, 2001). However, none of the theories above have been used to explore whether the redevelopment of an economically disadvantaged area creates a new dimension to immigrant concentration in a specific geographical area in a COR.

Findings from the dataset for the present study suggest that the potential redevelopment of an economic disadvantaged area actually creates the possibility of a concentration of newly arrived

immigrants (Ní Chonaill, 2009). Aldrich and Reiss (1976) and Neuman (2016) argued that large-scale areas and high residential concentrations of new immigrants favor the growth of immigrant enclaves. This formed the rationale for the present study to revisit the two most commonly used enclave formation theories and to examine the relationship between newly built housing and immigrant enclave formation. The article contributes to a gap in existing knowledge by explaining (a) a new dimension to enclave formation and suggests that the formation of an ethnic enclave is not just the result of discrimination or ethnic succession, but it can also be caused by the availability of new housing in an area, and (b) it explains the differences between the ready availability of housing infrastructures and ethnic succession theory of enclave formation.

Ireland, a country with a long history of emigration to countries such as UK, USA and Australia, has seen a significant rise in immigration into the country across the last three decades. This presents a fascinating case study for exploring the possibility of a new dimension in ethnic enclave formation. Immigrant enclaves are geographically delimited regions wherein a community of immigrants characterized by common national or ethnic origins as well as class diversity owns a significant fraction of settlement and local businesses (Gold, 2015). To do this, the article explores the literature regarding two of the most commonly used theories in defining immigrant enclave formation (ethnic succession and disadvantage theories), data set from in-depth interviews from the study of an immigrant community in Dublin and a narrative analysis to explain a new dimension on immigrant enclave formation.

Literature Review

Theoretical views on the formation of immigrant enclave varies, for example the disadvantage theorists suggest that immigrant enclave formation result from the discrimination immigrants are faced with on arrival in their country of residency (COR) (Aldrich and Reiss, 1976; Waldinger, 1986; Clark and Drinkwater, 2000). Some theories e.g. the immigration concentration theory claims that the gravitation of immigrants towards their political, cultural and economic life in a COR creates an environment where immigrants can maintain their ethnic identity (Gold, 1997). Some other theorists for example, the ethnic succession theory suggests that when a particular geographical area is vacated by a native-born population, it creates an opportunity for people of the same ethnic group to move into that space (Waldinger et al., 1986; Aldrich and Waldinger, 1990; Portes and Zhou, 1992; Brenner et al., 2010). While these theories are essential in explaining the formation of immigrant enclave, two theories (ethnic succession and the disadvantage theories) are used mostly to describe the formation of immigrant enclave.

From the current perspectives on immigrant enclave formation, the cultural theorists are of the view that the presence of Country of Origin (COO) culture in a specific geographical area brings immigrants together (Portes 1981; Lieberman, 1981; Portes and Manning, 1986, Waldinger, 1996; Portes, 2003; Zeltzer-Zubida, 2004; Berry, Phinney, Sam and Vedder, 2006; Chrysostome, 2010). However, the culturist theoretical views stands does not constitute the early factors for enclave formation, but helps our understanding of why immigrants behave in a particular way. Hence the focus on the ethnic succession and disadvantage theories that have been deemed essential to the early stage development of enclaves. The disadvantage theory one of the most used theories to explain immigrant enclave formation, argues that segregation from mainstream society may lead to the formation of a closely knit community within which ethnic groups can feel more secure, preserve their cultural identity and establish commercial relations with one another (Aldrich and Reiss, 1976; Waldinger, 1986; Clark and Drinkwater, 2000). Scholars and researchers often explain this disadvantage using factors such as linguistic barriers, discriminations immigrants are faced with in the labor market or unrecognized qualifications attained in the immigrant's COO (Wilson and Portes, 1980; Burstein, 1994; Light and Rosenstein, 1995; Berry, Phinney, Sam and Vedder, 2006; Fraser, 2009; Chrysostome, 2010).

Unlike the disadvantage theory, the ethnic succession theory described a scenario whereby the failure of the native inhabitants of an area to replace themselves within that area creates an opportunity for immigrant enclave formation (Waldinger et al., 1986; Aldrich and Waldinger, 1990; Portes and Zhou, 1992; Greene and Owen, 2004; Berry et al., 2006; Kruse, 2006; Brenner, Menzies, Dionne and Filion,

2010; Engelen, Lackhoff, and Schnidt, 2013). The understanding is when the inner city becomes less desirable for living space, economically successful social groups move towards the periphery, leaving the marginal 'zones of transition' adjacent to the developing business and industrial core to the less fortunate (Krase, 2006, p.86). Krase, then suggest that through this process of ethnic succession that the Italian neighborhoods in Brooklyn, the Bronx, Manhattan, Queens, and Staten Island in New York City became both concentrated and larger. This led to the claim by scholars such as Lobo, Flores and Salvo (2000), that ethnic succession theory as one of the pronounced rhythms in describing immigrant enclave formation.

Using the case of the Hispanic population in New York as base for arguing the role of ethnic succession in enclave formation; Lobo, et al., (2002), claimed that the upsurge in Hispanic population and the failure of the native inhabitants of New York to replace themselves resulted in an integrated pattern of settlement for the Puerto Rican and Dominican in five boroughs houses in the New York areas. More so, some other studies also suggested, this pattern of settlement often leads to the formation of an environment set apart from the mainstream environment by differences such as food, goods for sale, or even language (Aldrich and Waldinger, 1990; Lobo, 2020; Krase, 2006). From the perspective of the present article, ethnic succession describes an environment resulting from the failure of the native inhabitants of an area to replace itself. It defines an environment that provides the inhabitants with the security to engage in entrepreneurial opportunity, use their culture to their own advantage and encourage segregation from the mainstream population in a COR (Ottaviano and Peri, 2006).

Understanding the relationship between enclave formation and availability of new housing

To understand the relationship between the availability of new housing and the formation of immigrant enclaves, the unique settlement patterns of immigrant's subgroups need to be understood in the context of the political, social, and immigration forces operating in a country. Ireland, a country with a long history of emigration to countries such as UK, USA, and Australia, has seen a significant rise in immigration into the country across the last three decades. In the early 2000s at the height of the inflow of the Nigerians into Ireland, laws and policies were enacted to allow parents of Irish born children to seek life outside of the asylum camps and to settle in any county of choose in Ireland (Breen, 2003; Honohan, 2010). At this point, the newly arrivals can transfer from the refugee campus into private housing, as such the degree of encountered discrimination would have been less if at all. Hence, the present study taking into account theoretical findings and the dataset for the current study suggest a new dimension to immigrant enclave formation in a COR. As in the case of the present study, the redevelopment of Blanchardstown Village between 1996 and 2004 made additional housing available, thereby creating the possibility of a concentration of newly arrived immigrants into the area (Ni Chonail, 2009). This suggests a relationship between the availability of new housing and the formation of immigrant enclaves.

Contextual Setting

As Ireland is the primary focus of this article there is the need to present a profile of Ireland's diverse non-national population. Ireland, once a country of emigration, in the last two decades has seen a significant rise in immigration (Central Statistics Office, 2016; CSO). The CSO report 2016 estimated that Ireland's net migration (immigration less emigration) during the period 2011 – 2016 was -28,558, compared to net inward migration of 115,800 in the 2006- 2011 period. According to the 2016 national census data, the total non-national population in Ireland is 535,475, split evenly by gender, with 267,088 males and 268,387 females. Poland is the country of origin of the largest group (122,515), followed by the United Kingdom (103,113) and Lithuania (36,552). Germany, Italy, Latvia, Romania and Spain each have over 10,000 citizens residing in Ireland. An estimated 49,360 non-nationals are from North America, Australia and New Zealand. Approximately 55,750 are from Africa and 79,990 from Asia (O'Connell, 2018).

The data suggests that 60% of non-nationals are aged 22 – 44. The average age of the profiled non-nationals is 38.7, while 45% are married, 4% separated, 5% divorced and 42% are single. 57.1% of the profiled immigrants hold a third level degree. Currently, 200 countries of origin are represented in

Ireland's non-national population. Among Africans living in Ireland, Nigerians are the largest ethnic group, with an estimated population of 13,079. Of these, 4,078 were born in Nigeria, but have dual nationality, 2,287 were born in Ireland and have dual nationality, while 6,084 were born in Nigeria and retain sole Nigerian nationality (CSO, 2016). The average age of Nigerians in Ireland is 26.6 years, with one in four aged 15 years or younger. There are more females than males and over 50% are married. Roman Catholicism is the main religion (26%), followed by Pentecostalism (19%). Less than 1% of Nigerians claim to have no religion. Nearly half (45%) of Nigerian children aged 5 to 19 indicated they could speak some Irish. 38% of Nigerians aged 15 or over are in employment (50% of males and 30% of females (CSO Census Data, 2016).

A relatively high number (31%) are looking for their first job or are unemployed when compared to the other CSO profiled immigrant groups. The dominant work sectors are health and social work. Almost 30% of Nigerians have a third level qualification (31% in social sciences, business or law and 14% in health). According to the 2016 Census data, approximately 4,600 Nigerians reside in the Blanchardstown area of Dublin, with about 16 different ethnic businesses (hairdressing salons, barbers, money remittance, restaurants and food shops) serving their cultural needs. Of all the Africans profiled in the CSO 2016 census, Nigerians are by far the most urbanized, with a third of them living in towns with a population of 10,000 or more. Only 4% of Nigerians live in rural Ireland (CSO, 2016). The census data also indicates that over half of the Nigerians in Dublin are living in the Fingal County Council area, a third live in South Dublin, and a very small number live in Dublin's city center. They live mostly in rented private accommodation.

The redevelopment of Blanchardstown Village between 1996 and 2004 made additional housing available, thereby creating the possibility of a concentration of newly arrived immigrants during the Celtic Tiger boom period. As found in the study by Ní Chonail (2009), despite an increase in employment and the commercial development of the area, significant parts of Blanchardstown and adjacent areas continued to experience economic disadvantage (Ní Chonail, 2009). For example, Tyrrelstown had an unemployment rate of 25.89%, while the rate in Mulhuddart and Coolmine stood at almost 17%. These rates were significantly in excess of an area average of 11.13% and a national average of 8.5% (CSO 2018). As indicated by the literature review, such conditions frequently lead to the formation of an ethnic enclave (Aldrich and Waldinger, 1990; Volery, 2007). Ethnic enclave theories suggest that immigrants, on their arrival in a COR, when faced with adversity moved towards an area with COO culture (Waldinger, 1986; Aldrich and Waldinger, 1990; Berry et al., 2006; Engelen, Lackhoff and Schnnidt, 2013). Arguably, the re-development of Blanchardstown and the ready availability of housing, and in addition, its economic disadvantages could be suggested as the main reason for the high concentration of the Nigerians in the Blanchardstown area.

Analysis and Findings

This article revisits literature on two of the most commonly used theories in defining immigrant enclave formation; it examines data set in-depth interviews from the study of an immigrant community in Dublin and uses a narrative analysis to explain a possible new explanation for ethnic enclave formation. Findings from the literature reviewed and the data set for this study highlighted that the redevelopment of an economic disadvantage area can through the availability of new housing can contribute to ethnic enclave formation. The literature review cited numerous examples of how ethnic succession and discriminations drives immigrant enclave formation. The data set also described how the presence of readily available housing infrastructural aids immigrant's enclave formation. As presented in Table 1, findings from the literature reviewed and data are identified for discussion in the space of this article. The understanding from the literature reviewed is, immigrant enclave formation follows theoretical pattern such as ethnic succession and the disadvantage theories (Lieberson, 1981; Portes and Manning, 1986, Aldrich and Waldinger, 1990; Sensenbrenner, 1993; Waldinger, 1996; Zeltzer-Zubida, 2004). The subsequent discussion will elaborate on the summary of key findings provided in table 1.

Table 1: Key data set from immigration and immigrant enclaves

The ethnic Succession theory, explains how a once native-born population occupied area becomes a natural habitat for immigrants, describes a situation whereby the infrastructures and resources left behind by the native-born population becomes available for immigrants and ethnic groups (Liebersen, 1981; Portes and Manning, 1986, Waldinger, 1996; Zeltzer-Zubida, 2004). As in the case of the present study, the data extracts suggested the readily available new housing infrastructures supported the formation of an immigrant enclave, for example DE-1, DE-2 and DE-3 suggests that:

“At the time I came to Ireland there was housing being built, so it was easy getting accommodation in Blanchardstown, so this gave me the opportunity to move into the area” (Participant RI)

“The newly housing and infrastructures in Blanchardstown created a pathway for the coming together of the Nigeria culture” (Participant JE)

“The new infrastructure here providing a place for our culture to coming together, for interaction and identification with other Nigerians” (Participant MA)

The understanding from the primary dataset is that the formation of an immigrant enclave in Blanchardstown follows a slightly different pattern from the one suggested by the ethnic succession and the disadvantage theorists. While the failure of the native-born population to replace itself in an area is the suggested requirement for the formation of an immigrant enclave by the ethnic succession theorist (Lieberson, 1981; Portes and Manning, 1986; Waldinger, 1996; Aldrich and Waldinger, 1990; Portes and Zhou, 1992; Zeltzer-Zubida, 2004; Brenner et al., 2010). The case of the Nigerians in Blanchardstown, Dublin follows a slightly different dimension, the availability of new cheap housing infrastructures. In the dataset participants made a clear distinction between ethnic succession approach of enclave formation and the current Blanchardstown enclave formation through their consistency in the usage of the ‘New housing or new infrastructures’ see extracts DE-3 and DE-4 below (see also extract DE-6):

“The amazing things about Blanchardstown was the readily availability of new housing infrastructures and resources, this brought us together and allow us support each other (Participant BO)

I think the new housing development and infrastructures made it possible for the Nigerian culture to come into Ireland and for us to have a place we can call our own” (Participant ADOL)

The disadvantage theory argues that immigrant concentration frequently results from negative factors like linguistic barriers, discrimination in the labor market or unrecognized COO qualifications attained in the immigrant’s COR (Wilson and Portes, 1980; Burstein, 1994; Light and Rosenstein, 1995; Portes and Sensenbrenner, 1993; Marcuse, 1997; Alici, 2005; Ram, Barrett and Jones, 2012). Waldinger et al., (1986) Portes and Sensenbrenner (1993) and Alici (2005) claimed that the disadvantages immigrants face in a COR motivate them to form a refuge in which they can avoid discrimination, improve their employment prospects in a COR. Reitz (1980), Marcuse (1997), Berry et al., (2006) and Engelen, Lackhoff, and Schnidt (2013), disadvantage can lead to ethnic cohesion and the visible distinctiveness of an immigrant or other minority group. As in the case of the immigrant group for the present study, the dataset points towards the readily available new housing as the main reason for the formation of an enclave in that part of Dublin, not discrimination (DE-6 and DE-8):

“The readily available new housing and the state government aids that allow us to settle in anyplace was the main reason why we all moved to Blanchardstown” (Participant IF)

“It was not that we were facing any difficulties on arrival, the available new housing infrastructures here push us here” (Participant AD)

Kasseeah (2016) states that, the relationship between new formations and regional development is to a considerable degree shaped by policy implementation. At the height of the inflow of immigrants into Ireland, there was a state policy that allowed all asylum seekers to move directly from their refugee camp into rented accommodation, to a considerable degree this shaped the formation of an enclave in Blanchardstown (Breen, 2003; Honohan, 2010; Kasseeah, 2016). Additionally, government policy that allows immigrants with Irish born children to settle anywhere of their choice in the Republic of Ireland created a pathway for the coming together of the Nigerian culture in Blanchardstown (Breen, 2003; Ní Chonail, 2009). Scholars such as Gamidullaeva, Vasin and Wise (2020) mentioned that existing policies and regulations could inhibit development. In the case of Blanchardstown, this policy of moving from an asylum camp to rented private housing and the issuing of residency created avenues to avoiding discrimination from the mainstream society. Hence the suggestion that, in the case of the Nigerian community in Blanchardstown, government policies regarding settlement and the newly available infrastructures created a pathway for the formation of an enclave in Blanchardstown (Breen, 2003; Honohan, 2010).

Discussion

The study by Lam (2011, p.510), suggests that individual and external factors to a degree, shape the individual’s influence towards the undertaking of an activity. Charoensukmongkol (2016) argued that

the degree of interest and drive to adapt to new cultural surroundings aid the individual adaptation process. Ottaviano and Peri (2006) and Kemeny and Cooke (2018), natives may not enjoy living in a multi-cultural environment if they feel that their own cultural values are being endangered. The understanding from the collected primary dataset is that, the readily available newly built housing infrastructures created the opportunity for the Nigerians to settle in Blanchardstown. An infrastructure that become an external influence for the formation of an enclave in a country known for emigration, rather than immigration. In Ireland, for example, where a small number of Africans had been present since the 18th Century (Ugba, 2004), the early 2000s saw a rapid rise in immigration from African countries and a subsequent concentration of these immigrants in parts of Dublin and other urban centers where housing was more readily available at the time (Ní Chonail 2009; see also Waldinger et al., 1986; Aldrich and Waldinger, 1990; Portes and Sensenbrenner, 1993).

This formed the rationale for the present study to revisit the two most commonly used enclave formation theories and to examine the relationship between newly built housing and immigrant enclave formation. The article contributes to a gap in existing knowledge by explaining (a) a new dimension to enclave formation and suggests that the formation of an ethnic enclave is not just the result of discrimination or ethnic succession, but it can also be caused by the availability of new housing in an area, and (b) it explains the differences between the ready availability of housing infrastructures and ethnic succession theory of enclave formation. This presents a fascinating case study for exploring the possibility of a new dimension in ethnic enclave formation in a country known for emigration rather than immigration.

As per gap 1, to explain a new dimension to enclave formation, the article compares findings from a primary dataset against theoretical views of the ethnic succession and societal disadvantage theories, two prominent contrasting theories describing ethnic enclave formation. For example, the ethnic succession theorists claim the failure of the native-born population to replace itself in a specific geographical area creates opportunity for enclave formation (Waldinger et al., 1986; Aldrich and Waldinger, 1990; Krase, 2006). While, the societal disadvantage theorists suggests that enclave formation is dependent upon the level of discrimination that immigrants are faced with on arrival in a COR. Scholars and researchers have highlighted factors such as linguistic barriers, unrecognized qualifications attained in the immigrant's COO as disadvantages that drives ethnic cohesion (Wilson and Portes, 1980; Burstein, 1994; Light and Rosenstein, 1995; Berry, Phinney, Sam and Vedder, 2006; Fraser, 2009; Chrysostome, 2010). However, the dataset for the present study is of the view that readily available new housing infrastructure can contribute to the formation of immigrant enclaves. Chonail (2009), the redevelopment of Blanchardstown Village between 1996 and 2004 during the Celtic Tiger boom period made additional housing available, at a time when there was a frequent inflow of Nigerians into Ireland.

The literature reviewed indicates that, frequent inflows of immigrants into a COR usually lead to the movement towards an area with COO culture (Aldrich and Waldinger, 1990; Berry et al., 2006; Volery, 2007; Engelen, Lackhoff and Schnnid, 2013). However, dataset obtain for the present suggest a lack of immigrant enclave or the existence of the Nigerian culture in the Blanchardstown area of Dublin (Ireland). Davidsson, Recker and Von Briel, (2017) in the construct of the external enabler concepts, refer to an enabler as a factor that can facilitate the initiation, development and success of an activity. The lack of COO culture in Blanchardstown suggest that an enabler of enclave formation was missing as such, something has to give to allow for settlement by the new arrival In this case the available newly built housing could be suggested as the impulsion towards Blanchardstown Data extracts (see DE-1, DE-6) suggests this lack of an established enclave at the time, created the push towards an area with readily available new housing infrastructures. For example, in data extract DE-1 and DE-6, *"at the time I came to Ireland there was housing being built, so it was easy getting accommodation in Blanchardstown, so this gave me the opportunity to move into the area"* and Participant JE, *"the newly housing and infrastructures in Blanchardstown created a pathway for the coming together of the Nigeria culture"* In line with the above extracted dataset and the enabler concept, the newly built housing infrastructure becomes a facilitator to the initiation and successful formation of an immigrant enclave in Blanchardstown Dublin (Ní Chonail, 2009; Davidsson, et al., 2017).

As per gap B: To explain the differences between the ready availability of housing infrastructures and ethnic succession theory of enclave formation: The literature reviewed cited several definitions on the ethnic succession process of ethnic enclave formation. Lobo, et al., (2002) and Kruse (2006, p.85) claimed that, as the inner city becomes less desirable for living space, economically successful social groups move towards the periphery, leaving the marginal 'zones of transition' adjacent to the developing business and industrial core to the less fortunate. Scholars such as Portes and Sensenbrenner (1990), Marcuse (1997) and Alici (2005) in their studies on ethnic enclaves in Miami, New York, Harlem USA and in the UK, claimed that as immigrants' arrival in a COR, faced with the high cost of start-up moved towards an area with their COO demographic characteristics. This theoretical explanation of enclave formation follows known and accepted processes of enclave formation. However, the case of Blanchardstown follows a different path from the ethnic succession theorist views. In data extract DE-5: *"as at the time we came, we were asked to go and look for housing, so with the government aids then it was possible to look anywhere in Dublin, as there were many homes being built here so it was easy for us to get housing here"* (Participant ST). Conversely, in data extract DE-6: *"the readily available new housing and the state government aids that allow us to settle in anyplace was the main reason why we all moved to Blanchardstown"* (Participant IF).

The understanding is, the ease in gaining accessible accommodation, the lack of a specific geographical area in Dublin with COO culture and the available government support mechanisms directed at helping immigrants led to a swift move away from the original pattern of immigrant enclave formation as suggested by ethnic succession theorists. Thus, the main difference between ethnic succession and readily available new housing infrastructure are discussed in Table 2.

Table 2 - Differences between ethnic succession and readily available new housing

Ethnic Succession	Readily Available New Housing
<ul style="list-style-type: none"> ● Vacated housing formerly occupied by native-born population ● Left behind infrastructures ● Previous entrepreneurship culture ● Possibly no interaction between immigrants and native-born population. Immigrants keep to themselves and target only the immigrant's groups ● In most cases e.g. as in Chinatown New York, no native-born population around the area ● Create segregation and marginalization 	<ul style="list-style-type: none"> ● New constructed housing never been occupied before an immigrant moved in ● No previous existing infrastructures e.g. no shops and left behind entrepreneurial infrastructures ● No previous entrepreneurship cultures, e.g. no evidence of prior entrepreneurial activity in the area ● Low interaction between immigrant and native-born population ● Immigrants and native-born living side by side, creates cultural integration and ease of adaptation for the newly arrived immigrant ● Discourages segregation and marginalization and creates assimilation

Source: Author

In the early 2000s at the height of the inflow of the Nigerians into Ireland, enacted laws and policies that allowed parents of Irish born children to seek life outside of the asylum camps provided an enabler for the newly arrived immigrant to seek life anywhere they choose in Ireland (Breen, 2003; Honohan, 2010). This brings to the table a significant difference between ethnic and disadvantaged theorists' approaches of enclave formation and readily available new housing.

Zhou (2009) claimed that the social structure of immigrant neighborhood's formation often varies due to group-specific modes of integration, marginalization, immigration histories and the reception by the immigrant's COR. In New York's Chinatown, one of the world oldest enclave community, the Chinese immigrants were able to settle into the disadvantaged area vacated by the native-born population (see Table 2 above) (Portes and Sensenbrenner, 1993; Zhou, 2009). The Mexicans and Asians immigrants residing in Los Angeles County concentrate in the downtown area with their COO culture. The understanding from the above discussion is that, enclave formation results from the level of available COO culture and mode interaction in a specific geographical area at time of the immigrant's arrival in a COR. However, findings from the present study suggest that the readily available new housing and government policies directed at settling all immigrants in a COR encourages immigrant enclave formation. This does not suggest that the theoretical views on enclave formation are of less importance, but recommending a possible new dimension to immigrant enclave formation.

As discussed in Table 2 the significant differences between the ethnic succession theory and the readily available newly build housing are (a) the ethnic succession theory claimed the left behind structures creates opportunity for immigrants to settle in an area previously occupied by native-born population. However, the dataset for the present study found the readily newly build housing, never occupy by native-born population created living opportunity for the community under study, (b) the ethnic succession theorists suggests segregation from the mainstream society is commonly associated with the formation of the immigrant enclave, while the dataset suggested an environment whereby immigrants live alongside the native-born population. The understanding from this is, the case of the readily available newly build housing provide the opportunity for a together living in a specific geographical area for both the immigrants and native-born population, (c) that the failure of individual immigrants or entire ethnic groups to move up through the social hierarchies is linked either to their reluctance to shed traditional values or to the resistance of the native majority to accept them because of racial, religious, or other shortcomings.

Conclusion

This article revisits literature on two of the most commonly used theories in defining immigrant enclave formation; it examines data set in-depth interviews from the study of an immigrant community in Dublin and uses a narrative analysis to explain a possible new explanation for ethnic enclave formation. Findings from the literature reviewed and the data set for this study highlighted that the redevelopment of an economic disadvantage area can through the availability of new housing can contribute to ethnic enclave formation. Immigrant structural development usually occurs when immigrants seek refuge amongst people of similar culture and immigration experience (Betancourt and López, 1993; Portes and Sensenbrenner, 1993; Lin and Zhou, 2005). However, that these sets of immigrants on arrival choose an area with no known immigrant's cultural infrastructures, no discrimination in one form or the other and yet were able to establish in specific geographical area in a COR suggest a possible new pattern in enclave formation. Hence, the suggestion that the readily available newly built housing and the level of government support policies e.g. the law regarding Irish-born children at the time of their arrival created the opportunity for settlement in a redeveloped area (Breen, 2003; Ní Chonail, 2009).

Scholars such as Griffiths, Kickul and Carsrud (2009) and Gamidullaeva, Vasin and Wise (2020) mentioned that existing policies, regulations and bureaucracy could inhibit development. Kaseeah (2016), the relationship between new formation and regional development is to a considerable degree shaped by policy implementation. Mason (2009) and Ram, Jones and Villares-Varela (2017) suggest policy as a key driver of immigrant activities. Thus, the Irish government policy in the early 2000s of admitting immigrants to Ireland, gave the Irish government the responsibility for providing adequate housing settlement for the immigrants on their arrival (Honohan, 2010). More so, the law at the time regarding Irish resident permit for parents of Irish born children allowed parents to seek living arrangements wherever they chose, which encouraged settlement in a redeveloped area (Breen, 2003 and Honohan, 2010). Andersson and Larsson (2016) and Spigel (2017), the culture of a place is a key

component for creating and sustaining supportive environmental activity, in this case the settlement in an area with no known immigrant's infrastructures.

Despite existing all-encompassing research and theories on immigrant enclave formation, data from the present study suggest the formation of an immigrant enclave in Blanchardstown differs from the ethnic succession and disadvantage theories views on immigrant enclave formation. While the behavioral pattern of ethnic enclave formation aligned with known theoretical views, the present study found a move away from the theoretical pattern of an ethnic enclave formation as in the case of Blanchardstown. This new dimension, suggest that the enclave is not than just a shelter for the disadvantaged group in the community, rather, as a cohort for immigrants and native-born population in a COR. In conclusion it argued that, in addition to the ethnic succession and the disadvantage theoretical views in ethnic enclave information, the readily available housing infrastructure can also contribute to ethnic enclave formation in a COR. Therefore, future research on immigration and enclave formation should focus on exploring ways of lowering the negativity around enclave activities, so that the economic advantages of immigrant's concentration in a specific geographical area can be obtained.

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Organizational Design in a VUCA World: a Multi-Case Study of High-Growth Startups in Canada

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Abstract

In today's global environment, there are many opportunities for innovation. However, to develop a sustainable competitive advantage, it is important to design organizational structure and culture that facilitate startups in volatile, ambiguous, complex, and ambiguous (VUCA) environments. This study examined Canadian high-growth startups that conduct business globally. Primary data were collected through personal interviews on Zoom. The instrument was administered in a semi-structured format using an Interview Guide asking participants about factors of organizational structure and culture. Data were coded to protect anonymity and confidentiality. The sample consisted of startup professionals who voluntarily agreed to participate representing four comparable high-growth startups. Open and axial coding was used to identify emerging themes and common patterns. In the thematic analysis, five themes emerged on organizational structure and ten themes were related to organizational culture. The study found decentralized decision-making mechanism and non-hierarchical structure adopted by high-growth startups promoted business agility and transparent communication and increased collaboration among team members. In addition, transparent communication, reward systems, and employee learning and knowledge sharing promoted creativity and innovation. Flexible organizational structure and cultural values that foster innovation, teamwork, and knowledge sharing were noted to increase business growth addressing VUCA challenges effectively.

Keywords: *Organizational Design, Structure, Culture, VUCA environment, Startups, Innovations*

Introduction

Sustainable and successful startups are critical players in many economies. Intrinsically, high-growth startups are the backbone of the Canadian economy (Startup Canada, 2019). Nevertheless, only 54% of Canadian startup companies survive after five years, and the survival rate is inclined to 35% after seven years (Grant et al., 2019). Fierce competition in the current business arena stemming from emerging markets, ever-changing consumers' demand, fast-paced technology advancement, and economic volatilities created a turbulent and highly dynamic environment for many businesses, including startups.

Previous studies examined the correlation of startup survival rates and their financial performance (Bertoni et al., 2011), product innovation (Groenewegen & de Langen, 2012), and marketing perspectives (Franco & Haase, 2010). However, there has been minimal attention to the impact of organizational design on startups' success. Ries (2011) noted that the lack of structured management and rigorous procedures inhibit emerging startups from growth and sustainability. However, Bernstein et al. (2016) argued that startups could benefit from the flexibility of contemporary organizational design models to grow organically. The issue lies in the fundamental view of organizational design (OD) models

such as centralized versus decentralized that evaluates innovation and sustainability as two distinct phenomena, whereas they are two tales of the same continuum.

The purpose of this qualitative exploratory multi-case study was to examine the main characteristics of the organizational design relative to organizational structure and organizational culture of high growth startups in a VUCA world. This study narrowed the existing gap in current literature in two ways. First, this is the first study that examined the effect of organizational design on startups' success. Second, this is the first study that examined the relationship and influence of organizational structure and organizational culture components together and assessed the impact of different organizational elements on each other and on the organization's performance in an environment influenced by VUCA challenges.

Scope of the Research

To understand the success factors of high-growth startups, we strived to examine and answer the following main research question in the study: What are the characteristics of high-growth startups in a volatile, uncertain, complex, and ambiguous (VUCA) world relative to organizational structure and organizational culture? The main research question was divided into two sub-research questions:

Sub-Research Question 1: What are main characteristics of the organizational structure model adopted by high-growth startups in a VUCA world?

Sub-Research Question 2: What are main characteristics of organizational culture adopted by high-growth startups in a VUCA world?

Research Methodology

The study applied an exploratory, multi-case study method, we developed in-depth knowledge about the organizational structure and organizational culture within the context of selected startups. As explained by Yin (2003), a case study is selected when (a) the focus of the study is to answer how and why, (b) the researcher cannot manipulate the behavior of those involved in the study, (c) the researcher wants to cover contextual conditions because of their relevance to the subject under study, (d) the boundaries are not clear between the subject of study and its context.

Baxter and Jack (2008) suggested that using multiple-case studies could strengthen the result of a case study and offset the influence of participants' perception by allowing comparison between and within cases. However, Yin (2017) noted that in multiple-case studies, researchers should carefully select comparable cases to be able to replicate the result across those cases. Moreover, Ishak et al. (2014) claimed that random sampling might violate the purposeful condition of a case study method (Baxter & Jack, 2008). Therefore, we selected participants from four comparable high-growth firms in Canada. The study aimed to explore the impact of organizational design components, namely organizational structure and organizational culture, on the firm's performance and sustainability from participants' point of view. The qualitative case study allowed us to exploit an interpretive process and analyze the actual construction of meanings and concepts used by social actors in real-life settings. In addition, evaluating publicly available artifacts and online data sources, we conducted one-on-one online and phone interviews to collect primary data.

The research instrument was comprised of ten demographic questions and twenty-eight research questions targeting different organizational design aspects relative to organizational structure and organizational culture. The interview questionnaire included some probing and open-ended questions targeting similar data. Using a semi-structured interview approach enabled us to guide the interview and clarify participants' questions. Open-ended questions allowed us to verify the data by crosschecking the responses and clarify the answers with participants as prompted.

Research Instrument

The interview guide was designed to focus on various aspects of organizational structure and organizational culture within high-growth startups. The instrument consisted of 28 questions:

1. *How many vertical levels does your organization have? Please describe the levels and provide examples of the roles, functions, decision-making process, authority, job responsibilities, and tasks required, and departmental structure of the organization*
The purpose of this question was to identify the hierarchical level of the participating organizations. Hierarchy in an organization defines the power of authority and decision-making processes (Aghina et al., 2015).
2. *How many employees report to a single manager in your department?* This question was seeking the span of control among high-growth startups included in this study. The main purpose was to learn how broad and flat these organizations are.
3. *What is the process of strategic decision-making in your organization? Who and at what level, functional role, or department is involved in strategic decision making?* By asking this question, we examined the level of centralization and decentralization of decision-making processes within the high-growth startups.
4. *How quickly your organization responds to market demand changes?* This question aimed to identify agility and the company's responsiveness to market changes
5. *How fast can your organization pivot or repurpose current processes? Please provide examples, if possible.* This question was designed to understand (a) how quickly an organization can repurpose its current processes and (b) how they pivot and change their established processes.
6. *How does your organization develop marketing plans and respond to market changes?* To better understand the effect of market demand changes and marketing activities of the organizations, participants were asked to elaborate on their marketing activities.
7. *How does your organization incorporate innovation into its daily operations? Please explain the processes and practices used and to what extent they are effective.* Organizations that adopt strategic agility exploit flexibility and innovation to create value and sustain their competitive advantage (Weber & Tarba, 2014). Participants were asked about the level of agility and innovation.
8. *How would you describe the methods of communication within and between organizational units and divisions?* By posing this question, we aimed to understand how employees communicate within and between groups in a relatively flat organization.
9. *What are the levels and methods of collaboration between functional departments, i.e., finance, manufacturing, logistics, support, technology?* This question aimed to examine the level of collaboration and coordination among different units.
10. *How would you describe the overall culture of the organization? How does the organization develop, communicate, and implement the mission statement, vision, shared values, workplace practices, innovation, onboarding, communication, buy-ins, rewards?* We purposely included this open-ended question to explore and learn about the participant's personal experience about the existing culture of their respective organization before moving to focused questions.
11. *What processes are used to develop and enforce work procedures? Please explain and provide a few examples.* Organizational processes are factors that impact and influence an organizational culture (Christensen & Shu, 1999; Galbraith, 1995). The purpose was to examine what processes were adopted to enforce work policies and procedures.
12. *How would you describe the flow and transparency of information in the organization?* We examined communication and the flow of information to understand the level of transparency and frequency of shared information throughout the organization.

13. *What type of opportunity do you have to provide feedback to your supervisor? In general, how does your supervisor accept your feedback?* The purpose was to understand the level of communication and the process of providing feedback to managers and supervisors in the comprised cases.
14. *How often do you communicate and provide feedback, and in which format?* This question evaluated the process of providing feedback to subordinates.
15. *What keeps you motivated to stay with this company?* According to Christensen and Shu's PRP model (Christensen & Shu, 1999), resources are motivated and perform based on the rewards system. Similarly, a study conducted by Terera and Ngirande (2014) revealed that systematic reward and incentive systems influence employee motivation and retention. Heneman et al. (2001) defined rewards as monetary and non-monetary compensations that employees receive either based on behavior or performance measurement. Thus questions 15-20 examined the existence and effectiveness of reward systems within high-growth startups.
16. *How satisfied are you with the salary, types of incentives, rewards, benefits?* Tangible (financial) and intangible (non-financial) incentives and rewards impact employee motivation and retention. This question explored the level of satisfaction in terms of incentives among high-growth startups.
17. *How are these incentives and rewards compared to other similar organizations/industry standards?* The purpose of this question was to explore employees' perceptions of their pay and financial incentives compared to other competitors.
18. *What do you think of the pay and benefits you receive relative to what you do?* According to Wu et al. (2013), employees' perception of fairness and pay equity impacts their motivation and performance. Participants were asked about their views on their financial incentives compared to the job they perform.
19. *What is the process of promotion in your organization?* By asking this question, we examined the promotion process, which is another motivational factor that influences the way people behave in an organization (Schein, 1991). According to Christensen and Shu (1999), the promotion system in an organization directly influences the organizational culture as it impacts how people perform and behave.
20. *How does your company accept or nurture innovative ideas? What type of incentives are provided to innovate?* Developing a creative and innovative culture to overcome VUCA challenges is inevitable (Hinssen, 2015). Flexible cultures like adhocracy and clan (Cameron & Quinn, 2011) promote creativity and innovation. Therefore, this question along with the next two, focused on the company's innovative culture to understand how high-growth startups nurture innovation and creativity.
21. *What type of innovation receives more attention? Breakthrough (Radical) or Incremental?* The purpose of this question was to understand the type of innovation that high-growth startups foster. Oke (2007) discussed that both breakthrough and incremental innovations impact a company's performance and long-term growth. Therefore, this question's results helped us to identify the types of innovation adopted by the startups.
22. *What is the process of incubation of new ideas? How long does it take to introduce, develop, and implement new ideas and projects? How effective are the processes used to innovate in the organization?* During the interview process, we further elaborated that the incubation term in this question differs from startup incubation through venture capital companies or business incubation. In this question, we examined the implementation process of an innovative idea within high-growth startups.
23. *How often and in which format do you receive professional learning development on the job?* Cousins (2018) discussed that employee learning and development results in a

- significant competitive advantage in a VUCA environment. In this question, we examined employee learning's format and velocity among high-growth startups.
24. *What is the process of new learning and knowledge sharing among your employees?* The purpose of this question was to understand the format and velocity of knowledge sharing among employees in the high-growth startups examined.
 25. *What type of training and employee development do you have in place? Please explain who decides what type of training is needed for employees?* Participants were asked to discuss the type of learning that employees receive at the firm.
 26. *How would you describe the overall manager-employee relationship at your organization? Please explain and provide a few examples to illustrate some of the organizational structure and cultural factors.* Hinssen (2015) advocated that promoting a culture of understanding cultivates employees' curiosity and creativity. Managers may stimulate curiosity and creativity by providing a safe and open environment where employees can take risks and exploit new opportunities (Horstmeyer, 2019). Therefore, this question explored the openness and relationship between managers and employees to examine how high-growth startups nurture creativity.
 27. *Based on your experience, what are some of the main organizational characteristics of small, high-growth startups?* We explored the participant's lived experiences regarding characteristics of high-growth startups. This open-ended question provided an opportunity to discuss the participant's perceptions of high-growth startups either based on their current experience or previous experiences working in other startups.
 28. *What recommendations do you have that could help improve organizational structure and organizational culture in small, high-growth startups?* The final question asked participants to provide recommendations for improving high-growth startups' performance based on their experience. We examined the data to cross-reference the responses and verify previous answers as necessary.

Population and Data Collection

According to Innovation, Science and Economic Development Canada (ISED), firms that experience an average annual growth rate of 20% either in revenue or employment over three consecutive years are recognized as high-growth firms (Rosa, 2017). Therefore, the present study focused on high-growth firms with 100-499 employees that had shown a steady growth of at least 20% in annual revenue or employment within three consecutive years. To meet these criteria, we evaluated publicly available secondary data of seventeen high-growth firms. Finally, we selected four comparable cases from four different industries: Fintech, mobile applications, artificial intelligence, and higher education. Even though these organizations serve different industries, they all were comparable. The four firms were technology-based and developed software platforms to serve their customers in their respective industries.

Data collection included one-on-one, personal phone interviews with an equal number of a sample of employees from each organization. Initially, we contacted twenty-seven potential participants that were selected purposefully based on their experience and job responsibilities, tasks, and functions from the above organizations. Out of twenty-seven who received the invitation letter, nineteen (70%) responded positively and requested further information. After sending the "Informed Consent Form" and "Interview Questions" to those nineteen individuals who initially agreed to participate, five participants (26%) declined to move forward, and only fourteen recipients (74%) opted to participate in interview sessions. After receiving the signed consent forms, we scheduled online interview sessions according to the participant's availability.

The interview sessions were audio-recorded upon obtaining permission from participants. Subsequently, we transcribed the responses and sent the transcription for participants' review and confirmation and verification of captured verbatim. Three participants (21%) were reluctant to confirm and verify their interviews verbatim. Therefore, we excluded the result of their interviews and continued the data analysis with eleven confirmed participants. Data saturation was reached after coding the ninth interview, at which point no new code emerged anymore.

Data Coding and Analysis

NVivoPro 12 qualitative data analysis (QDA) software was used to detect frequencies and similarities between responses and identify commonalities, patterns, and emerging themes relative to organizational structure and organizational culture. We used the emerging themes to apply thematic analysis and ultimately answer the research questions. By using the Autocode function in NVivoPro 12, a separate code for each interview question was generated. To avoid personal and confirmation bias, we first coded each transcribed file separately using an open coding technique, which resulted in a substantial number of codes. Then, we used propositions derived from the literature review to develop axial coding based on the initial codes. Using the axial coding technique helped us analyze collected data from multiple cases and participants.

Data analysis included identifying commonalities and similarities by patterns and frequency counts of words and expressions to determine the relationship between different factors of organizational design components and the successful performance of high-growth emerging startups. The analysis of in-depth data helped us identify several emerging themes.

Demographic Data of Participants

Table 1 below illustrates the demographic data of the final eleven participants. To comply with confidentiality and anonymity requirements, we replaced organization and participant's names with pseudonyms. The sample consisted of 64% (7) participants male and 36% (4) female participants. From the four organizations examined, there were three respondents each from three firms and two participants from one firm.

As shown in Table 1, 18% (2) participants worked for their respective companies for less than a year, 18% (2) have been with their company for over one year but less than two years, 45% (5) indicated that they worked for the same company for more than two years but less than three years, and 18% (2) had noted they worked with the company for over three years.

Results and Findings

The results of question-based coding yielded 138 free codes and 608 reference points in total. To develop more focused categories and themes, we first used the Word Frequency function of NVivo to identify the most frequent themes. We then used axial coding to develop aggregated and more relevant themes from open coding. In total, fifteen themes and 574 reference points were identified, out of which five themes and 206 reference points linked to organizational structure, and the remaining ten themes with 368 reference points were identified under organizational culture. Table 2 shows the main themes of the elements of organizational structure and organizational culture.

Table 1 - Demographic Data of Participants

Name	Sex	Organization	Years with Company	Current Title	Previous Roles with the same Company	Previous Experiences before joining the company
Participant1	Female	Organization 3	2-3 years	VP of Products	Product owner, Product delivery director	ML programmer, product SME, and Product marketer
Participant2	Male	Organization 4	1-2 years	Director of Enterprise Client Relationship	No Change	Marketer, Enterprise Marketing Manager and Relationship Manager
Participant3	Male	Organization 3	1-2 years	Head of Delivery	Director of delivery	VP of IT, CIO
Participant4	Female	Organization 3	3+ years	Staff Lead	programmer, PM	Directly from school
Participant5	Male	Organization 2	2-3 years	Head of Market Research and Strategy	No Change	Chief marketing office, VP of strategy.
Participant6	Male	Organization 4	3+ years	Data Engineer	Database management specialist and data modeler	Programmer, database specialist and backend architect
Participant7	Female	Organization 1	2-3 years	Product Manager	No Change	Product owner and project manager
Participant8	Male	Organization 2	2-3 years	Technical Lead (ML Development)	ML Programmer, Data Scientist	Directly from school
Participant9	Female	Organization 4	2-3 years	Partner Relations Manager	No Change	Sales Rep and Client Relationship Specialist
Participant10	Male	Organization 2	< 1 year	Enterprise Business Development Representative	No Change	Business Development Rep
Participant11	Male	Organization 1	< 1 year	Software Engineer	No Change	Programmer and System Architect

Table 2 - List of Interview Questions and Corresponding Research Questions

Research Question	Interview Questions	Emerged Themes	Frequency of Codes
Sub-Research Question 1	Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10, Q27, Q28	Decentralized	76
		Enable Innovation	50
		Strategic Agility	42
		Flatter Org Chart	26
		Enable Collaboration	12
Sub-Research Question 2	Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q20, Q21, Q22, Q23, Q24, Q25, Q26, Q27, Q28	Rewards	73
		Openness	65
		Adhocracy	49
		Learning & Development	46
		People-oriented	33
		Innovative	25
		Informal environment	22
		Processes	20
		Knowledge Sharing	18
Resources	17		

To evaluate the findings, we used propositions derived from literature to categorize the above-noted aggregated themes under the organizational structure and organizational culture. The separation of thematic codes at this stage allowed us to answer each research question as well as examine the intermediary role of identified organizational structure and organizational culture themes on the success of high growth startups in Canada.

Sub-Research Question 1: What are some main characteristics of the organizational structure model adopted by high-growth emerging startups in a VUCA world?

The emerging themes for organizational structure models among high growth startups confirmed previous literature and theories about effective organizational design in a VUCA world. All participants (100%) stated that their respective organization is decentralized. We spotted seventy-six reference points related to different aspects of decentralization. Decentralization was examined in two ways: decision-making and communication of information. Out of thirty-four references relative to decision-making, twenty-two (65%) references indicated that their organization has a decentralized decision-making mechanism. While twelve (35%) references suggested dynamic decision-making as an effective strategy to address VUCA challenges.

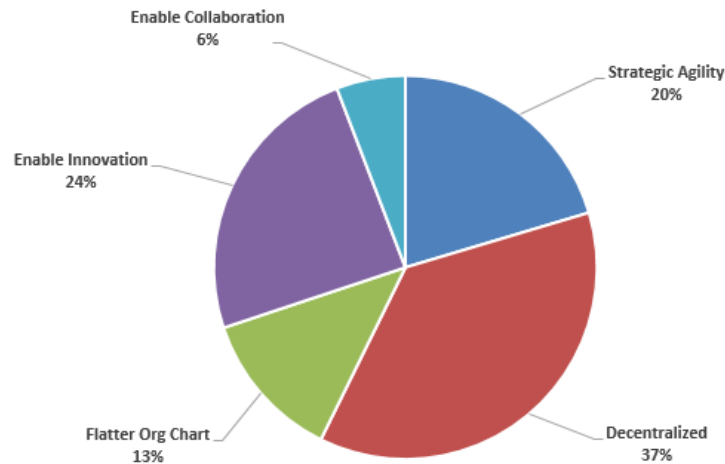
Forty-two references pointed that a decentralized organization structure cultivates frequent communication and transparent information flow using Enterprise Social Media Platforms (ESMP) such as Slack. Twenty-eight (67%) responses confirmed that open communication is fundamental in a decentralized organization. However, fourteen (33%) responses restated more standard processes and rigors required for effective communication as the company matures, particularly when conveying difficult messages

Innovation was the second characteristic spotted fifty times in participants' responses. In total, eight (73%) participants said innovation is at the core of their business. Out of which, 91% of participants said focusing on continuous improvement, incremental innovations, and the short-term incubation cycle have signified their respective company's success and sustainable growth.

Strategic agility is another characteristic of high-growth startups empowered by a decentralized organizational structure. As highlighted in Table 2, strategic agility with 42 reference points ranked third in the thematic list of organizational structure characteristics. This study's findings confirmed that high-growth startups cultivate agility to remain relevant in today's competitive market by responding swiftly to market changes. While all participants (100%) confirmed that their approach in responding to market changes is agile, two participants (18%) claimed that agility and quick changes create pressure and frustration. The above responses agreed with Mintzberg's (1980) adhocracy structure model.

A lower chain of command and a wider span of control within studied firms demonstrated a flatter organizational chart and reporting structure. The study's findings were in line with Mintzberg's (1980) definition of flat organizations powered by a decentralized structure. According to Mintzberg (1980), in decentralized organizations, the power of authority is distributed among lower-level employees, which was identified among participants as a positive aspect of organizational structure. Moreover, the responses confirmed collaborative culture among high-growth startups, which is vital in a VUCA environment.

In summary, the results showed that *Decentralization* (37%), *Innovation* (24%), *Strategic Agility* (20%), *Flat Organizational Structure* (13%), and *Collaboration* (6%) were highlighted as dominant themes related to organizational structure factors that influence the performance of high-growth startups (Figure 1).

Figure 1 - The Proportion of Reference Points for Organizational Structure

Sub-Research Question 2: What are the main characteristics of the organizational culture adopted by high-growth startups in a VUCA world?

Thematic analysis of responses related to organizational culture factors revealed ten main categories (Table 2). The high reference points within the answers related to the reward system confirmed that rewards play a dominant role in high growth startups' successful performance. We examined the effect of monetary and non-monetary rewards, including the promotion system and nature of the job, to gain insight about reward factors that participants value the most.

More than two thirds, 64% (7) participants stated that they are satisfied with monetary incentives, while the remaining 36% were not satisfied with their salary and other monetary incentives. Regarding the impact of the job on their satisfaction, 54% (6) answered that they love what they do. Although all participants mentioned that they have some sort of liquid rewards such as free lunch, coffee, or corporate gym membership, only one participant explicitly mentioned that free perks justify the low salary. This study's findings confirmed Heneman's argument (2001) that liquid rewards differentiate the company's culture only at the early stage of startups. Nonetheless, the notable unsatisfactory responses confirmed that startup companies should revise their reward system as the company matures. Further investigation revealed that all unsatisfied participants that mentioned lack of long-term benefits as a significant downside were among mature employees. In contrast, younger employees endorsed short-term benefits and corporate perks.

The answers to the promotion question were mixed as 45% said there is a promotion plan in their respective company, while the remaining 55% expressed no transparent promotion system. 27% (3) participants said that having a non-monetary reward and recognition system is a great vehicle to improve employee satisfaction. This study's findings agreed with Heneman et al. (2001) argument regarding the impact of rewards on job satisfaction and employee retention. The collective responses to reward-related questions did not confirm that fluid rewards such as free perks are sustainable, especially for the long-term.

Openness was the second emerged theme that was mentioned 65 times. Participants viewed open, transparent, and informal communication altogether as positive factors in their culture. Moreover,

according to the provided responses, a frequent two-way feedback system between an employee and their direct supervisor develops a trust bond that positively influences employee engagement and performance.

The combination of responses relative to collaboration, creativity, sense of urgency, autonomy, teamwork, outcome-driven, and dynamic culture yielded the adhocracy theme. Among the above-noted emerging themes, collaboration, autonomy, and dynamic environment were dominant responses with 64%, 50%, and 43%, respectively. The observed characteristics of the adhocracy theme agreed with Cameron's definition of adhocracy culture. According to Cameron and Quinn (2011), companies that adopt adhocracy culture experience a higher degree of pressure, which was observed in the comprised cases in this study. However, this study did not find any evidence of employee turnover under adhocracy culture, as Aldhuwaihi and Shee (2015) claimed.

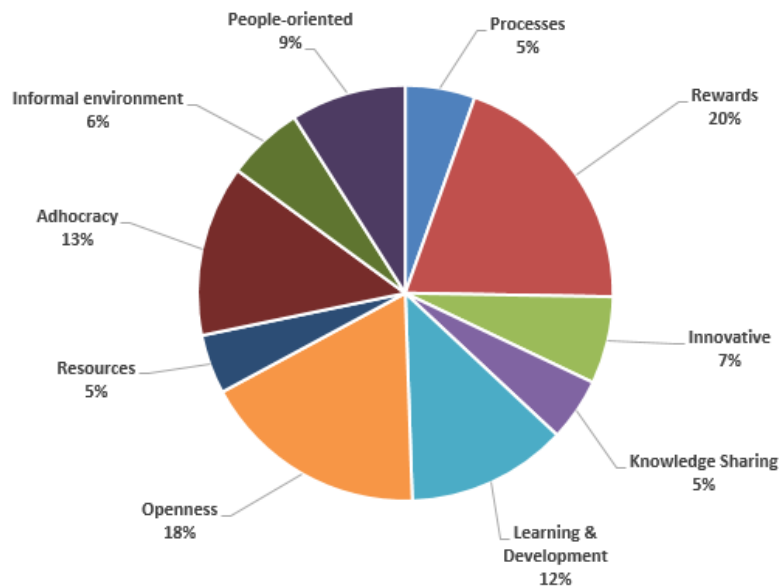
The fourth theme that emerged from participants' responses was *learning and development* that participants mentioned 46 times. Despite differences between the type of learning and professional development plans offered by each case included in this study, all participants (100%) and three organizational artifacts (75%) clearly stated that they have employees' learning and development plans in place. However, two participants (18%) complained about the absence of a solidified learning plan throughout the organization.

The above findings relative to employee learning were in line with Cousins' (2018) findings of employee learning as a competitive advantage in a VUCA world. Moreover, 100% of participants stated that their company provides external training. 70% of participants mentioned peer learning as part of their culture. Also, 60% of participants said they have a knowledge-sharing procedure in place. 82% (9) participants called their organization highly innovative.

The people-driven culture was another theme that participants mentioned frequently. According to the collected data, 82% of participants confirmed that their people-oriented culture motivates them to remain with the company. Empathy, and diversity and inclusion were the highest spoken factors in this category, with 71% and 57%, respectively. All participants (100%) identified their business environment as informal. 73% defined their working atmosphere as respectful and friendly stemming from their people-driven culture.

Processes were another significant organizational design component that impacts how people perform and interact with each other (Christensen & Shu, 1999). All participants (100%) confirmed that they have processes and procedures in place. However, out of 20 reference points, sixteen (80%) called their processes effective and rigorous, expressly around product development, but 20% of responses conveyed a lack of proper processes and procedures, mainly around organizational change management. 82% (9) participants called visionary leaders and talented resources a significant competitive advantage. However, about 45% (5) participants noted despite being visionary and talented, the leaders were not well equipped with the necessary leadership skills. While there is a gap in the literature concerning entrepreneurs' and startup founders' leadership skills, the findings of this study confirmed Zaech and Baldegger's (2017) claim that most startup founders and entrepreneurs neglect to focus on leadership skills as a necessary competency that drives business performance.

Figure 2 demonstrates the aggregated results for organizational culture factors. *Rewards* (20%), *Openness* (18%), *Adhocracy* (13%), *Learning & Development* (12%) were dominant factors noted that influenced the organizational culture of the high-growth startups.

Figure 2 - The Proportion of Reference Points for Organizational Culture

Discussion of Findings

This qualitative exploratory, multi-case study revealed that high-growth startups adopt flexible organizational design models to quickly respond to the ever-changing market demands. This study's findings helped narrow the existing gap in the literature by confirming the organizational design model adopted by high-growth startups in the context of VUCA.

The themes that emerged indicated that high growth startups in Canada benefit from a flat and decentralized organizational structure model where decision-making authorities are divided horizontally and vertically throughout the organization. This structure is aligned with the adhocracy structure model defined by Mintzberg (1980). Furthermore, the findings confirmed the claim made by Christensen et al. (2015) that business leaders foster emerging strategies to allow flexibility and adaptivity as the market evolves and unforeseen events occur in an uncertain environment.

The current volatile and uncertain business environment demands adaptability and agility to thrive in a highly competitive business arena influenced by VUCA. The conducted thematic analysis findings revealed that the decentralized organizational structure model adopted by high-growth startups promotes agility, enabling firms to respond to the market demands quickly. This study's finding ratified the argument made by Harraf et al. (2015) that flexible organizational structure enables agility. Additionally, as per our findings, strategic agility, and decentralization of effective communication among different units promote innovation and collaboration.

This study showed that fostering emerging strategies is supported by an adaptive organizational culture and a flexible and decentralized organizational structure. This study's findings extrapolated that high-growth startups adopt a highly communicative, adaptive, and open culture. The observed organizational culture agreed with Sinha et al.'s (2017) that adaptive cultures enable quick and effective decision-making, which is critical to succeed and overcome VUCA challenges.

Moreover, the highly spoken of different reward systems within high growth startups confirmed the imperative role of rewards in organizational design. In that way, the study's findings agreed with the discussion of Heneman et al. (2001) regarding the impact of rewards on job satisfaction and employee retention. The collective responses to reward-related questions did not ratify that fluid rewards such as free perks are sustainable, especially for the long-term. Therefore, because of the direct impact of rewards on employees' motivation and turnover decisions, emerging startups should evolve their rewards system as the company grows and matures.

The open and transparent feedback system among high-growth startups agreed with Codreanu (2016), who advocated that regular and honest feedback improves employee engagement and overall performance. Also, transparent communication allows organizations to develop a culture of understanding. As Hinssen (2015) accentuated, a culture of understanding promotes strategic thinking and innovation vibe among employees. Moreover, the culture of learning and knowledge sharing observed among high-growth startups was in line with Cousins (2018) and Rodriguez and Rodriguez (2015) about employee learning as a competitive advantage in a VUCA world.

The analysis of the data showed that high-growth startups foster adhocracy or creative culture, as defined by Cameron and Quinn (2011). Under an adhocracy culture, employees enjoy the highest level of flexibility (Schimmoeller, 2010). However, employees may experience a higher level of pressure to develop new initiatives so the company can benefit from a first-mover advantage and remain competitive. Although Aldhuwaihi and Shee (2015) argued that the stated pressure might cause employee turnover, this study did not find any evidence of turnover decisions caused by pressure.

Additionally, the findings confirmed that decentralized and flat organizational structure promotes agility and quick decision-making that both are necessary to overcome VUCA challenges. According to the study's findings, leadership skills, organizational change management processes, and long-term rewards have been neglected among most cases included in this study. The results did not find any relationship between employee turnover and the organization's adhocracy culture.

Limitations

This research had some limitations, particularly in participant reach. In addition, some participants' responses may have been influenced by emotional strains because of the global pandemic. Furthermore, this study was limited to make a conclusive argument about the absence of turnover decisions among participants because the lack of turnover among comprised cases could have been stemmed from economic instability caused by the global pandemic.

Despite inviting twenty-seven potential participants that were randomly selected from the comprised high growth startups, only eleven (41%) opted to participate in this study. Out of the final eleven participants, six (55%) were from the top two management levels. The optimistic view of the leadership team on their organization's culture may have impacted their responses unconsciously. This limitation stems from the fact that a qualitative study relies on participants' perspectives and their lived experiences about the subject of the study. Thus, participants' voluntary participation may have posed an unavoidable selection bias.

Another limitation was that four participants (36%) did not have any direct report to provide a qualified answer for the impact of two-way communication and feedback system between employee and supervisor. Nonetheless, data saturation for feedback and communication themes was reached without their responses. Lastly, two participants (18%) have been with their company for less than a year, so they could not provide conclusive answers about all aspects of their company's organizational structure and organizational culture.

Reliability, Validity, Generalizability

We designed the research instrument, interview protocol, and data collection methods in advance to ensure consistency and reliability. The interview questions and protocol were used for all participants. There was no modification to questions or interview protocol during the data collection process to ensure all participants answer the same questions.

The validity of the data was achieved by relying on the trustworthiness of participants. Moreover, before starting the interview sessions, we assured participants about confidentiality protocol and anonymity of participants' responses, allowing participants to provide their personal and genuine perspective about the subject in question without fear of being spotted by their colleagues. Additionally, participants were given the opportunity to review their transcribed interview responses and modify or clarify, as they felt necessary. Furthermore, triangulation was achieved by using multiple cases and multiple participants from each case to increase the credibility and validity of the collected data.

Four comparable cases from different industries were selected to achieve the study's generalizability and transferability. However, this study's following limitation may not qualify the result of this qualitative multi-case study to be generalized as an accepted theory. The population of this study was limited to high-growth startups in Canada. Because of differences in individual and ecological (national) culture, economic factors, and regulatory requirements posed on startups in different regions and countries, this study's result may not be generalized to other geographical locations. Therefore, to avoid committing an ecological fallacy, this study's finding may be accepted only for high growth startups in Canada or any other region that share the same ecological dimensions.

Implications to Management

Leading through uncertainties and challenges posed by VUCA is inevitable. As discussed in this study, business leaders may adopt emerging strategies empowered by a decentralized and non-hierarchical organizational structure to thrive in such a volatile business arena. In the same vein, managers should not undervalue organizational culture's support and influence on the success of organization's strategies. As Galbraith (2011) noted, a firm's strategy has a two-way relationship with organizational culture. Christensen and Shu (1999) and Green (1989) claimed that culture should support the strategy because organizational culture is shaped by people who execute the strategy. Similarly, Kane et al. (2015) argued that organizational strategy influences organizational culture and decision-making authority. Kaul (2019) suggested that in a VUCA environment, the strategy should precede organizational culture. Further, as Kaul (2019) claimed, managers should align organizational culture with corporate strategy to prosper in a VUCA world. Moreover, in a VUCA environment, managers should design organizations with agility and flexibility to respond to VUCA challenges (Boynton & Victor, 1991).

Adhocracy culture can nurture creativity and innovation that are essential for overcoming VUCA challenges. As discussed in this study, adopting an adaptive and flexible culture such as adhocracy may augment employees' engagement and ultimately empower creativity and innovative capabilities. Moreover, promoting a collaborative and transparent culture such as adhocracy allows managers to effectively respond to market changes. Furthermore, visionary leaders may use the positive effects of a caring and empathic culture to augment employee loyalty and affective commitment.

The study confirmed that adhocracy culture is well suited for innovative organizations that adopt business agility to facilitate short-term goals and develop breakthrough products. However, as the company matures and scales up, business leaders should consider shifting the adhocracy culture towards a clan culture where collaboration precedes competition. Also, evolving reward systems is necessary as it

directly impacts employees' motivation and retention. Furthermore, as the company grows, business leaders should develop leadership skills to pro-actively address organizational challenges. In addition, leaders in a VUCA environment must be able to adopt flexibility and manage organizational change effectively.

Conclusions

This exploratory multi-case study examined characteristics of organizational structure and organizational culture models of high-growth startups in Canada. Future researchers may expand on this study from different research perspectives. For example, quantitative research may be used to confirm the findings of this study to help develop a generalized and accepted model of organizational design in a VUCA world. In addition, future research could expand the findings to explore the impact of a systematic promotion and rewards system on employee retention and performance. Additional research is needed to explore the effect of leadership skills on organizational culture and employee engagement of high-growth startups. Researchers may also examine further the organizational design elements of high-growth startups in other countries and regions. Future studies could also examine organizational factors in different areas. Additional research may also examine the effects of demographic and economic differences on organizational culture and the success of high-growth startups.

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An Integrated model of the Internationalization of born-global SMEs of an Emerging Economy

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Abstract

We examine the antecedents of early internationalization of SMEs also known as born-global firms in an emerging economy. Drawing from the resource-based view, a conceptual model is proposed to examine the relevance of human capital for the internationalization of born global SMEs. In so doing, this model conceptualizes *how* human capital and learning orientation (internal resources) and *when* foreign alliances (external) resources influence the early and rapid internationalization of born global SMEs especially in the context of a developing economy – Pakistan. The hypotheses of the proposed model were empirically tested on a sample of 112 born-global SMEs of the ICT sector. The results of this study have not only highlighted the direct link of human capital with the internationalization of born global SMEs, but research findings have also shown the indirect role of learning orientation in facilitating the positive influence of human capital on the internationalization of born global SMEs especially in the presence of a higher number of foreign alliances. It implies that the indirect relationship between human capital and internationalization cannot be facilitated through learning orientation until and unless firms maintain higher levels of foreign alliances.

Keywords: Born-global SMEs, Learning orientation; human capital; foreign alliances; and international entrepreneurship.

Introduction

Advancement of information technology as one of the key drivers of globalization has empowered the small and medium enterprises (SMEs) of emerging economies, which are resource-constrained and face vulnerability for their global expansion (Falihat, Knight & Alon, 2018; Haase & Franco, 2011; Li, Li, Goerzen & Shi, 2018; Love & Roper, 2015; McDougall & Oviatt, 2000). We postulate that emerging market firms of the developing economies like Pakistan succeed by engaging in a proactive pursuit of internationalization since the day of their existence (Khan and Lew, 2018). In current times, the urge of firms to rapidly internationalize is not primarily constrained by liabilities of foreignness, larger domestic market base, and huge capital requirements because these shortcomings can be overcome by marketing skills, technological capabilities, human capital, innovative competencies and partnering skills (Paul et al., 2017; Sui & Baum, 2014; Javalgi & Todd, 2011; Knight and Cavusgil, 2004).

The above-mentioned aspects are quite prevalent in the case of the SMEs of information and communication technology (ICT) sector of Pakistan (Khan and Lew, 2018), with services ranging from software and hardware consultancy, call center services, export of computer software (PSEB, 2017). These types of firms who pursue a very proactive globalization agenda since their inception are referred as *born-global* firms (Bagheri et al., 2019; Cavusgil & Knight 2015; Knight & Liesch, 2016; Madsen &

Servais, 1997; Rennie, 1993). The empirical research aims at revealing the actual bundles of resources and capabilities that make SMEs internationalize early is incipient (Bagheri et al., 2019; Francioni, Pagano & Castellani, 2016; Knight, 2015; Gassmann & Keupp, 2007; Knight and Cavusgil, 2004). This study attempts to fill this gap and makes a number of contributions to literature by focusing on the internationalization of born global SMEs.

We draw from the resource-based view to propose a conceptual model to examine *how* human capital and learning orientation (internal resources) and *when* foreign alliances (external) resources influence the early and rapid internationalization of born global SMEs especially in the context of an emerging economy – Pakistan. The hypotheses of the proposed model were empirically tested on a sample of 112 born-global SMEs of the ICT sector of Pakistan. The findings of this study demonstrate that in born-global SMEs the human capital of the organization influences its internationalization provided it is optimally calibrated with the learning orientation and foreign alliances of the firm.

This study contributes to the resource-based view of the firm by suggesting that bundle of internal and external resources enhance value for one another such that the indirect relationship between human capital and internationalization can only be facilitated through learning orientation unless and until firms maintain the higher levels of foreign alliances. This study answers the call by the scholars (Knight and Liesch, 2016; Knight, 2015), who urged researchers to depict the influence of knowledge resources and alliances on the internationalization of born global SMEs of developing economies. Moreover, it demonstrates how learning orientation through information and knowledge dissemination in organizational structures and processes facilitate internal (human capital) and external resources (foreign alliances) for the rapid internationalization of SMEs (Subramaniam & Youndt, 2005; Saarenketo et al., 2004; Autio, Sapienza & Almeida, 2000). It is imperative to note that prior research has mainly focused on the role of the human capital of the entrepreneurs, mostly neglecting that firm-level human capital that can also be of significance for resource constraint SMEs of developing nations (Onkelinx, Manolova & Edelman, 2016a; 2016b; Kungwansupaph & Siengthai, 2014; Campbell, Coff & Kryscynski, 2012; Ganotakis & Love, 2012; Ruzzier et al., 2007). This study articulates and demonstrates the idea that apart from focusing on the entrepreneurial human capital, the human capital of the entire organization should be considered as a valuable resource especially for the internationalization of the born global SMEs.

Theoretical underpinnings and hypotheses

The resources of a firm include all the assets, skills, attributes of the organization, routines, knowledge that are necessary for it to operate efficiently and stand out strategically from its competitors (Barney, Wright and Ketchen, 2001). These tangible and intangible firm resources form the core of its competitive advantage in the markets where they operate (Barney, Ketchen Jr & Wright, 2011; Barney, 1991). In particular, intangible assets such as tacit or codified knowledge, information, experiences, and skills set of internal and external firm actors result in idiosyncrasies, which ultimately facilitate firm expansion including the internationalization of firm (Stoian, Dimitratos & Plakoyiannaki, 2018; Hatch & Dyer, 2004; Wright, McMahan & McWilliams, 1994). Knowledge of a firm can be perceived as something that embodies its employees in the form of human capital. It can also be shared with the members of the firm's network or within groups characterized as social capital or institutionalized within the processes, routines, memories and information bases of the firm, which is regarded as organizational knowledge (Youndt & Snell, 2004; Wright, Dunford & Snell, 2001).

Over the years, resource-based view has become one of the most relevant theories in the management literature for articulating the competitive behavior of firms and providing the most dominant explanation of inter-firm performance differences (Nason & Wiklund, 2018; Lonial & Carter, 2015; Barney et al., 2011; Hakala, 2011; Kraaijenbrink, Spender & Groen, 2010; Hoopes, Madsen & Walker, 2003; Barney et al., 2001). The resource-based view puts forward the idea that firms can be assumed as bundles of tangible and intangible resource endowments collected and developed over a course of time and more importantly, these bundles of resources are heterogeneously distributed across firms (Nason & Wiklund, 2018; Peteraf, 1993; Penrose, 1959; Wernerfelt, 1984). These superior resources can be

characterized in the following three categories: 1) physical capital that includes plant, material, machinery, geographical location and accessibility to raw materials; 2) human capital which is composed of trainings, judgments, intelligence, insights and relationships of the workforce; and 3) organizational capital that encompasses reporting systems, formal and informal planning, controlling and coordinating systems as well as informal relations with other firms (Tabares, Alvarez & Urbano, 2015; Barney, 1991).

Under the premises of resource-based view, a firm can potentially achieve competitive advantage and outperform its rivals in the markets (Barney et al., 2011; Barney et al., 2001; Nason & Wiklund, 2018; Barney et al., 2001; Peteraf, 1993). In this regard, the past literature has meticulously elaborated the role of numerous organizational resources, capabilities and strategic orientations for the advancement of various organizational goals including internationalization (Javalgi and Todd, 2011; Subramaniam and Youndt, 2005). Inward internationalization is referred to such activities, which domestic firms undertake with foreign market firms in their home markets such as joint ventures, franchising, licensing, imports of products, raw materials and technology (Li et al., 2017). Importing is generally associated with high fixed sunk costs as before importing firms have to bear the cost of searching for potential partners in foreign markets, costs of negotiations and inspection of products. Outward internationalization represents the engagements of domestic firm in foreign markets including franchising and/or licensing to foreign firms, mergers, acquisitions, establishing subsidiaries and export of goods or raw materials (Li, Yi & Cui, 2017). In the past, research on internationalization has primarily focused on large MNCs but very recently the attention is being paid to the SMEs of the emerging markets, which have been indulging in rapid internationalization (Bagheri et al., 2019; Cavusgil & Knight 2015; Knight & Liesch, 2016).

Selling or aiming to sell products and services to foreign markets is the most common practice done by emerging market firms to enter into international markets (Aulakh, Rotate & Teegen, 2000; Zhou, Wu & Luo, 2007). There can be a variety of reasons for firms to enter foreign markets such as saturated home markets, unutilized production capacity, better opportunities for products in foreign markets, unfavorable climate in the home country, intense competition in local markets and encouragement by government export agencies to state a few (Bell, 1995; Kaynak, Ghauri & Olofsson-Bredenl w, 1987). Firms can successfully tap into international markets by utilizing both internal and external resources as suggested by resource-based view. These resources support firms to deal with challenges of operating in multiple and heterogeneous markets around the globe pertaining to the advanced technical knowledge and superior skill level of employees (Love & Roper, 2015). Likewise, these firms can effectively deal with risks, uncertainties and complexities inherent in the phenomena of internationalization (Onkelinex et al., 2016 b).

Human capital and internationalization of the firm

According to Barney, (1991, P. 101), the human capital of a firm comprises of the “training, experience, judgment, intelligence, relationships, and insights of individual managers and workers in a firm” (Nyberg, Reilly, Essman & Rodrigues, 2018; Marvel et al., 2016; Youndt & Snell, 2004). The idea that human capital may lead a firm to the competitive advantage has been widely acknowledged, as it ensures attainment of distinctive capabilities for a firm (Youndt & Snell, 2004). The knowledge-based view of the firm, which emerged from the resource-based view argues that knowledge embedded in the human capital of a firm is an ultimate source of competitive advantage as it is the most universally valuable and inimitable resource (Grant, 1995; Kogut & Zander, 1992).

Human capital fulfills the VRIN criteria as well as satisfies the resource heterogeneity and imperfect mobility assumptions of the resource-based view. It is due to that fact that it includes the stock of competencies, trainings, knowledge, skills, expertise, and connections that individuals gain through education and experience (Barney et al., 2011; Hatch & Dyer, 2004; Wright et al., 1994; Barney, 1991). Highly intellectual and skilled employees can contribute to the firm’s well being. As noted by Wright & McMahan (1992), the experience of employees can be vital in shaping up human capital. A vast stream of prior research has deemed firm performance to be an outcome of human capital for the variety of industries (Nieves & Quintana, 2018; Crook, Todd, Combs, Woehr & Ketchen Jr, 2011; Collins & Smith,

2006; Youndt & Snell, 2004). Taking this debate further, it will be relevant to examine the relevance of human capital as a very useful and fundamental resource for the internationalization of born global SMEs (Onkelinx et al., 2016b; Francioni et al., 2016; Brock, 2012; Javalgi & Todd, 2011; Fletcher, 2004). It is because of the fact that the level of knowledge, skills, talent, and experience human capital can provide to the born-global SMEs for their rapid internationalization (Onkelinx et al., 2016a; 2016b). Firms that have higher human capital can adapt to new technologies and dynamic market conditions by timely sensing the need for change, developing and implementing efficient strategies to meet the changing needs. High level of human capital paves way for firms to internationalize easily by rationally dealing with these types of challenges (Onkelinx et al., 2016a; 2016b). As per the above discussion, a direct and positive link between human capital and internationalization of born-global SMEs is proposed in the following hypothesis.

Hypothesis 1: Human capital is positively related with the internationalization of born-global SMEs.

The mediating role of learning orientation

Learning orientation is a vital factor in growth and survival of firm in a contemporary knowledge-based economy (Kungwansupaph & Siengthai, 2014). The concept of learning orientation is extensive, subjective and associated to numerous facets of learning (Kungwansupaph & Siengthai, 2014). Learning orientation equips the firm with a set of values that encourage the generation, usage or applicability of knowledge (Sinkula, Baker & Noordewier, 1997). Organizations tend to store this knowledge in their organizational procedures, norms, rules, and forms. Organizations take time to accumulate such knowledge from the mutual learning of their employees into their structures, processes and routines.

According to the resource-based view, learning is considered as a superior resource as compared to other resources of the firm. Indeed, it enables firms to access market information more rapidly as compared to competitors and this faster response to market information may in turn assists these firms in maintaining their competitive advantage (Baker & Sinkula 1999). Thus, growing firms need to be committed to learning as it plays a vital role in obtaining competitive advantage especially for the rapid internationalization (Wang, 2008; Autio et al., 2000).

Born global firms differ from other international firms with respect to their internationalization as they do not follow incremental internationalization and they do not have the opportunity for steady learning (Saarenketo et al., 2004). Indeed, the born global firms have to learn fast to adjust their internationalization strategy and develop the absorptive capacity to leverage their internationalization gains (Onkelinx et al., 2016a). Human capital is an essential resource to positively influence firm level learning and knowledge accumulation (Youndt & Snell, 2004). Human capital is typically the outcome of individual learning that in turn significantly enhances ongoing learning within the organization (Hsu & Fang, 2009; Hatch & Dyer, 2004). Human capital builds tacit and codified knowledge of organizations through learning, which is not readily expropriated by rival firms (Hitt, Bierman, Shimizu & Kochhar, 2001).

Firms that value learning can develop a learning orientation that involves a continuous search for better ways to adapt to complex and foreign environments (Fernández-Mesa & Alegre, 2015; Ruokonen & Saarenketo, 2009). When firms utilize their resources including human capital for their international expansion then their learning activities facilitate their knowledge base, polish their skills to learn from their stakeholders (experiences and mistakes) and eventually enable born global SMEs to apply the knowledge in the local as well as international markets (Clercq et al., 2005; Autio et al., 2000; Weerawardena, Mort and Liesch, 2019). In the case of rapid internationalization of born global firms, it has been suggested that these firms capitalize on the experiential knowledge of their employees (human capital) for the rapid internationalization and this relationship can be further facilitated through the learning orientation of firms. The learning orientation of born global SMEs can act as an underlying factor for the internationalization of born global firms. For these types of firms, it implies that learning being in place prior to the internationalization efforts of these newly established organizations actually

facilitate for their rapid internationalization (Sharma & Blomstermo, 2003; Autio et al., 2000; Oviatt & McDougall, 1997). Thus, born-global firms tend to focus on their resources especially human capital for rapid internationalization but the internationalization of born global firms can be further improved through an underlying mechanism of learning orientation. According to the above discussion, we hypothesize that learning orientation can act as a mediator for the positive relationship of human capital with the internationalization of born-global SMEs in the following hypothesis.

Hypothesis 2: Learning orientation mediates the positive relationship of human capital with the internationalization of born-global SMEs.

Social capital, learning orientation and internationalization

Social capital is based on a simple and straightforward notion of making investment in social relations with the expectation of returns in the marketplace (Lin, 2001). The notion of network theory suggests that networks are integral for information flows, resource acquisitions and quicker response of firms to market opportunities (Lin, 2008). Literature has time and again stressed that network theory can further strengthen the competitive advantage of firm in uncertain markets (Li et al., 2018; Stam et al., 2014). It is because of the fact that firms maintain network ties with a mutual understanding of sharing resources, opportunities and valuable information among the members of the network (Adler & Kwon, 2002; Lin, 2001). Furthermore, these favors are extended to the members of network only (Falahat et al., 2018). In this regard, foreign alliances may help firms to establish their supremacy over their competitors (Barney et al., 2001). Hence, the social capital based on the network ties of the firm is captured through the number of foreign alliances of a firm to represent the level of social capital for this research (Li et al., 2018).

Foreign alliances are voluntary agreements or understanding between independent firms to look for market opportunities, develop and commercialize new products, technologies, and services to achieve mutual benefits (Morais & Franco, 2018; Gulati, 1998). Foreign alliances and other forms of cooperation have been a strategic option that is increasingly used by firms to gain competitive advantage. It is imperative to mention that this option does not rests in internal resources of the firm but in shared resources and capabilities of network (Braga et al., 2016; Brouthers et al., 2015). These alliances are valuable to the firm as they may prove to be an attractive alternative for accessing complementary assets for the firm otherwise not available, reducing information asymmetries and sometimes mitigate the risk inherent in international operations, particularly true in the case of rapidly internationalizing new ventures (Coviello, 2006; Paul et al., 2017; Brouthers et al., 2015; Child & Hsieh, 2014; Barney et al., 2001). Through these networks, global firms can enhance knowledge and capabilities by allying with partners with distinctive value and culture systems (Jiang, Tao, & Santoro, 2010; Lavie & Miller, 2008). Due to the pertinence of social networks, this study examines the relevance of foreign alliances as a boundary condition regarding the link between learning orientation and internationalization of SMEs as postulated in the following hypothesis.

Hypothesis 3: Foreign alliances will moderate the positive effect of learning orientation on internationalization such that at higher level of foreign alliances the indirect effect will be higher.

Social capital is regarded as a recent addition to the discussion of firm's intangible resources and their consequent relationship to attaining competitive advantage (Paul et al., 2017). Due to the exclusivity of sharing tangible and intangible resources among network members, the social capital can enable the network members to access both intangible and tangible assets of the partner organizations, which are otherwise unavailable to the firm (Huggins & Johnston, 2010). Developing and utilizing existing social networks can facilitate internationalization, as they enhance knowledge and educate firms about the potential opportunities in foreign markets, provide advice regarding optimal ways and procedures of conducting business as well as experiential learning to the SMEs (Zhou et al., 2007). Thus, firm resources, capabilities, and networks can potentially enhance the chances of internationalization of born

global SMEs. In this regard, foreign alliances of the firm when underpinned by resources such as human capital and learning orientation become an unmatched source of firm internationalization (Suseno & Pinnington, 2018). Hence, this research aims to determine the role of foreign alliances as an external factor that can influence the indirect effect of learning orientation on the relationship between human capital and internationalization.

Hypothesis 4: Foreign alliances moderates the positive indirect effect of human capital on internationalization through learning orientation such that at higher level of foreign market alliances the effect of human capital on internationalization can be higher.

Research methodology

Sampling

To test the hypothesized relationships, data was collected from the born-global SMEs of the ICT sector of Pakistan. There are two basic criteria for firms to meet and to be characterized as born global firms: 1) they internationalization within 3 years of their inception; and 2) they must generate 25% of their revenue from international markets (Knight & Liesch, 2016; Cavusgil & Knight, 2015). The sample was generated using a non-probability sampling technique known as snowball sampling. Snowball sampling technique yields a study sample through referrals among respondents who share or know of others who possess some characteristics that are of research interest (Bell, Bryman & Harley, 2018; Biernacki & Waldorf, 1981).

A list of SMEs of ICT sector is accessed from the official website of Pakistan Software House Association (P@SHA). This list of ICT companies was used to identify relevant SMEs for this study. Firms were contacted and were asked whether they internationalized within 3 years of inception and earn 25% of their revenue from foreign markets. Firms that met the born-global criteria were requested to participate in this study. Furthermore, the respondents were requested to provide information or share the questionnaire with their colleagues who enjoy a similar status at an ICT firm as the respondent. Hence, in this way a snowball sampling procedure was used to expand the sample size. The unit of analysis in this study was the firm but the unit of observation was top management including CEOs, COOs, and other senior managers (Calabró, Campopiano, Basco & Pukall, 2017).

Data collection

Survey questionnaires were administered from CEOs or senior managers of the born global ICT firms of Pakistan. The questionnaires were sent through e-mails. It is important to mention that data was collected in 2019. The target respondents contacted through e-mail were given two reminders after a three weeks gap after that they were not contacted. In order to account for ex-ante common method bias, respondents were ensured that the data/information provided by them will be kept confidential and presented anonymously at aggregate levels and will purely be used for research analysis purposes (Altınay, Madanoglu, Vita, Arasli & Ekinci, 2016). For this study, 250 companies were contacted, which resulted in 117 responses. Out of these 117 responses, 5 questionnaires were unusable. Hence, a sample size of 112 born global SMEs operating in the ICT sector of Pakistan was obtained.

Research instruments and variables

This study is composed of 04 major variables. The 05-items scale for measuring human capital (independent variable) was adopted from the work of Youndt & Snell, (2004). The 11-items learning orientation (mediator) scale was adopted from the work of Sinkula et al. (1997). Foreign alliances (moderator) is a continuous variable that determines the number of foreign alliances a firm maintains, was borrowed from a recent work of Li et al. (2018). Internationalization comprises of two sub-scales, inward and outward internationalization (Zhou et al., 2007). Three control variables namely: firm performance, firm size, and foreign market experience of owners were included. Subjective firm performance measures the aspects of customer loyalty, product development costs, profitability and sales growth, which can influence the strategic decisions of a firm (Escribá-Esteve et al., 2008). Firm size is measured as the

number of full-time equivalent employees and foreign market experience of owners is measured as the number of years that owner(s) have spent in the foreign market (Oh, Kim & Shin, 2019; Javalgi & Todd, 2011; Contractor et al., 2005; Contractor & Kundu, 2004).

Data analysis and results

A series of steps were carried out to establish the validity and reliability of the data. A preliminary analysis was conducted followed by a confirmatory factor analysis (CFA). After getting satisfactory results of CFA, a mediation, moderation and second stage-moderated mediation were conducted.

Descriptive statistics

The data collected from born-global SMEs suggested that 72% of the SMEs opt for internationalization within the first year of operations, 15% internationalized in the 2nd year and the remaining 13% within the third year of operations. According to Small and Medium Enterprise Authority (SMEDA), SMEs are characterized as having up to 250 employees, firms in the sample ranged from a minimum of 05 employees to a maximum of 250.

The correlation between the independent, dependent and control variables is determined through Pearson correlation coefficients. The correlations coefficients for the control variables were less than .7 and control variables were not correlated with the dependent variable and hence excluded from the final model (Becker, 2005; York, 2018).

Multivariate analysis

Confirmatory factor analysis (CFA) was conducted in order to check the goodness of fit, reliability and validity of the variables being used in this study. The following values of fit indexes were generated: chi-square = 257.525, degrees of freedom = 143, probability level = .000, CMIN/DF (ratio of chi-square to degree of freedom) = 1.801. This is one of the most essential components of the fit indices and it indicates a reasonable fit of this model, as the value is less than 3 (Hoe, 2008). The values for different indices include incremental fit index (IFI) = 0.874; comparative fit index (CFI) = 0.87; and root mean square error of approximation (RMSEA) = 0.08. It is argued that the goodness of fit indices (CFI, IFI) should be between 0.9 to 1 for a perfect fit, however, most of the researchers have reported values of 0.85 that is usually considered as an appropriate fit as well (Hair, Babin & Krey, 2017; Schreiber, Nora, Stage, Barlow & King, 2006). Likewise, values for RMSEA has ranged from 0 to 0.22 with an average of 0.081 as argued by Hair et al. (2017). Moreover, a value of 0.08 for RMSEA indicates a satisfactory fit (Hoe, 2008). These statistics provide evidence that the RMSEA along with model fit indices provide a satisfactory fit of the overall model.

The reliability and validity of variables was measured using the values of factor loadings of indicators and correlations among the variables in Microsoft Excel spreadsheet made by Michaël Korchia. Reliabilities were computed to test how closely related sets of items are as a group (Hair et al., 2011; Field, 2009). Factor loadings express the relation of each variable with its underlying factor. For factors/items to form a latent construct the factor loadings have to be greater than 0.5 (Hair et al., 2010), items with factor loadings less than 0.5 were excluded from the model.

Fornell & Larcker (1981) suggest that a variable is reliable if it produces the Jöreskog's rho value greater than 0.6. Convergent validity is measured by average variance extracted (AVE). Hair et al. (2017) and Fornell & Larcker (1981) suggested that a latent construct holds convergent validity if it produces the value of average variance extracted (AVE) greater than 0.5 and holds discriminant validity if its value of average shared variance (ASV) is less than AVE. Moreover, Cronbach's alpha is used to measure internal consistency; values above 0.7 indicate that the results are reliable (Hair et al., 2010). Our results illustrates the values of Cronbach's alpha, Jöreskog's rho, AVE and ASV indicating that the measurement model met the validity and reliability criteria.

Results of hypotheses testing

This study is based on mediation, moderation, and second stage moderated mediation models that were performed to test the proposed hypotheses. The proposed model was estimated using SPSS univariate linear regression analysis and the Process macro by Hayes. For hypothesis 1, the results indicate that human capital has a direct significant relationship with internationalization ($\beta = 0.452, p < 0.000$). The overall model fit for the regression was statistically significant ($F(1, 110) = 28.235, p < 0.000$) with a value of R^2 indicating that 20.4% of the variation in the dependent variable caused by independent. Hence, providing ample evidence to accept hypothesis 1.

To test the hypothesis 2, mediation analysis was conducted. Based on the results, the direct impact of human capital on internationalization is insignificant ($c' = 0.1055, p = 0.3134$). However, the effect of human capital on learning orientation is positive and significant ($\beta_1 = 0.593, p = 0.000$) as well as the impact of learning orientation on internationalization ($\beta_2 = 0.5118, p = 0.000$). The indirect effect is significant and direct effect is insignificant, contributing to the evidence for an indirect only mediation (Zhao et al., 2010). Hence, it can be concluded that hypothesis H_2 is accepted which stated that learning orientation mediates the positive relationship between human capital and internationalization.

The number of foreign alliances is proposed to moderate the relationship between learning orientation and internationalization. Foreign alliance significantly impact internationalization ($\beta = 0.0583, p = 0.0625$). Combined together, learning orientation and foreign alliances have a significant interaction effect on the internationalization of born global SMEs ($\beta = 0.0767, p = 0.0099$). Our results shows the effect of learning orientation on internationalization at different values of the moderator such that at higher values of moderator the impact of learning orientation on internationalization is strengthened and thus, H_3 is supported.

The fourth and most important component that is measured is the combined impact of moderator and mediator as moderated mediation on the internationalization of born global SMEs. The coefficient for the interaction effect of moderator and mediator yields significant result ($\beta_4 = 0.0791, p = .0077$). This is also known as the test of the highest order unconditional interaction. It signifies that the indirect effect of human capital on internationalization through learning orientation is dependent upon foreign alliances. By this reasoning, the evidence of moderation of one of the links in a mediation model is sufficient to claim moderation of mediation (Hayes, 2015). This analysis supports the conclusion that the indirect effect of human capital on internationalization through learning orientation depends on foreign alliances of firm therefore H_4 is supported.

As per the PROCESS macro, the values of moderator can be divided into three intervals, which are valued at 1 standard deviation below mean, at mean and 1 standard deviation above mean (Hayes, 2015). If the indirect effect is moderated, then any two conditional indirect effects estimated at different values of the moderator are significantly different from each other (Hayes, 2015). It has been established that the moderated mediation at mean and +1 of standard deviation above mean is significant. These findings clearly indicate that at a lower level of foreign alliances the indirect relationship between human capital and internationalization cannot be facilitated through learning orientation unless and until firms maintain an average or higher levels of foreign alliances.

Last, a bootstrap confidence interval for the index of moderated mediation, which is the slope of indirect effect function and it does not include zero provides more direct and definitive evidence of moderated mediation (Hayes, 2015). The positive slope of indirect effect shows that for all meaningful values of moderator, the indirect effect is an upward sloping line. Hence, the indirect effect of human capital on internationalization through learning orientation is an increasing function of foreign alliances. The value of the index which is the same as the value of slope co-efficient of the indirect effect along with the standard error and at the level of 95% confidence interval that does not include zero. The index of moderated mediation reveals that the overall model is significant, providing evidence in the support of H_4 . As per H_4 , it is suggested that number of foreign alliances moderate the positive indirect effect of human capital on internationalization through learning orientation such that with a higher number of foreign alliances the indirect effect is also higher.

Discussion

The research findings emphasize the relevance of both internal and external resources through the juxtaposition of human capital, learning orientation and number of foreign alliances for the internationalization of born global SMEs in a developing economy. These resources allow firms to implement efficient strategies (Barney, 1991) and enable firms to lower prices and drive market expansion (Nason & Wilkund, 2018). Furthermore, this study borrows the lens of resource-based view to explicate the internationalization of born global SMEs. In so doing, this study has conceptualized and tested a model that encapsulates the pertinence of both internal (human capital and learning orientation) and external (number of foreign alliances) resources for the internationalization of born-global SMEs.

It has been widely argued that the development and growth of young technology-based firms are particularly dependent upon innovatively combining their firm-specific resources including knowledge with their external partners because young firms are resource constrained (McDougall, Shane, & Oviatt, 1994; Baum, Schwens and Kabst, 2015). The knowledge embedded in the internal resources such as human capital and learning orientation is exclusive to the firm only and so are its associated benefits (Oh et al., 2019; Gerschewski et al., 2015; Kogut & Zander, 1992). Likewise, firms maintain network ties including alliances with a mutual idea of sharing resources, opportunities and valuable information among members of the network (Falahat et al., 2018; Felzensztein et al., 2015; Adler & Kwon, 2002; Lin, 2001). This research argues that young firms may develop social capital (in the form of foreign alliances) as a strategy to aid in acquiring new knowledge (Welch, 2015; Yli-Renko et al., 2001). These capabilities are accumulated and developed over time and cannot simply be bought or acquired (Subramaniam & Youndt, 2005; Hatch & Dyer, 2004). Thus, all these organizational resources and capabilities are unique to the firm and their optimal use results in competitive advantage when firm implements such strategies to create value which other companies cannot efficiently replicate. There has been a dearth of research that has postulated and examined the role of human capital as an antecedent of internationalization of born-global SMEs as most of the researchers have focused on performance as a consequence of human capital (Onkelinx et al., 2016a; 2016b; Marvel et al., 2016; Crook et al., 2001). This study has demonstrated the indirect effect of human capital on internationalization through learning orientation and subsequently checks when does that indirect effect varies with the level of foreign alliance of born-global SMEs.

The findings of the study indicate that knowledge embedded in organization due to its human capital is an excellent resource to be leveraged by SMEs to tap into foreign markets. Also, the knowledge creation and absorption in a firm are usually embedded in a firm's processes, routines, and memories representing learning orientation (Hitt et al., 2001). When born-global firms enter foreign business environments, they must quickly build the capabilities necessary to obtain a competitive position. Learning orientation enables them to adapt and grow in such an environment and to achieve the aim to internationalize rapidly by preparing firms for a fast-changing international business environment (Kungwansupaph & Siengthai, 2014). The findings of this study have shown that *how* learning orientation can facilitate the link between human capital and internationalization of the born global SMEs of the ICT sector.

In addition to the set of internal resources, modern firms are born to operate in a globalized world. With respect to the globalization, the social capital is another valuable, rare and inimitable external resource capable of not only providing privileged access to information (Nahapiet & Ghoshal, 1998) but it also connects external resources embedded in networks to firm-level resources. This study indicates that the level of foreign alliances provides born-global firms with opportunities for new businesses and are considered more prominent for their rapid internationalization (Li et al., 2018). The born-global firms that rapidly and widely develop networks or alliances have been able to achieve global reach quickly and expediting their simultaneous access to multiple foreign markets (Baum, Schwens and Kabst, 2015; Chetty & Campbell-Hunt, 2004; Rialp et al., 2005). Acquiring network connections also provides the capability to generate ideas for the development of knowledge-intensive products, as well as specific knowledge pertaining to customer preferences and how international markets can be targeted and properly satisfied (Falahat et al., 2018). However, such alliances need to be underpinned by the different types of

resources including human capital and learning orientation (Suseno & Pinnington, 2018). Essentially, the findings have highlighted the pertinence of foreign alliances as flexible conduits for the sharing and exchange of knowledge. It is due to the fact that a higher number of alliances influence the indirect relationship between human capital and internationalization through learning orientation.

Conclusions and implications

The research that is intended to explore the actual bundles of resources that make developing economy born global SMEs internationalize is still in embryonic phase (Knight, 2015; Welch, 2015; Felzensztein et al., 2015; Cavusgil & Knight, 2009; Gassmann & Keupp, 2007; Knight & Cavusgil, 2004). This study has borrowed the lens of the RBV of the firm and extends this theory to examine the influence of internal and external resources on the internationalization of born-global SMEs (Falahat et al., 2018; Knight & Liesch, 2016; Knight, 2015).

Taken together, these findings have important implications that not only enhance and refine conceptualizations of the role of internal and external resources in internationalization, but also offer useful and specific guidelines for the owners and managers of born global SMEs. There is no denying that the acquisition of skilled human capital is the necessary condition for the internationalization of born global SMEs of the ICT sector in a developing economy like Pakistan. Thus, the firm that needs to internationalize since its inception requires large investments in the development of its human capital. These investments of time and money in employees can enhance a human capital that can be beneficial for rapid internationalization. Investments in human capital also play a pivotal role in enhancing learning orientation. Focus on developing learning capabilities of the firm are important as they enable rapid responses to complex and uncertain situations.

This study implies the importance of foreign alliances for the entrepreneurs and managers of born global SMEs, which is proven to be a pivotal factor for the internationalization. In order to reap the benefits of learning orientation, the firms need to maintain the higher number of foreign alliances because a low level of alliances would not make any significant contribution towards the indirect link between human capital and internationalization. Hence, managers of the born global SMEs need to pay attention and invest more in their social relationships and networks. These social relations actually help in dealing with a lot of uncertainty associated with foreign markets. Thus, top managers should adopt such strategies that stimulate the firm's expansion in the external market through alliances.

Nevertheless, this study like other empirical studies has several limitations. The first limitation of this research is the 'culture effect'. SMEs usually display a national style of management; since the data for this research has been collected from Pakistan only then the generalizability of this study is limited to the Pakistani context (Haase & Franco, 2011). Thus, a comparative study is recommended. Another concern is regarding the snowball sampling and the limited sample size. Due to the exclusive nature of respondents (CEOs, senior managers) and characterization of firms as born-global, it would have been difficult to conduct a probability sampling technique and obtain a larger sample size. Future studies can be conducted through probability sampling technique. Survivor bias might also be a limitation in this case; as the of sample of this research only includes born-global SMEs that have survived, and it may be possible that different relationships would emerge if failed firms had been included in the sample (Clercq et al., 2008; Yli-Renko et al., 2001).

This study has followed a cross-sectional research design to collect data; future studies may use a longitudinal research design to establish causal relationships and find evidence of how these relationships evolve over time. Investigation of this study is limited to the impact of human capital on internationalization only; future research may explore performance of born-global SMEs after internationalization. Following a longitudinal design, it would also be interesting to note any variation in born-global firm performance before and after internationalization. Moreover, researchers can use latent constructs for social capital that encompass numerous types of affiliations and relationships rather than using a single-item measure as a proxy for social capital. Different types of network ties with managers, customers, and governments can be used to examine their relevance for internationalization of SMEs.

This study only focused on the ICT sector, it would also be interesting to undertake a multiple-group analysis to compare the results across different industrial sectors.

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Analyzing Consumption Patterns of the Consumers in Extreme Poverty: A Case of North Koreans Compared to South Koreans

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The Purposes of the Study

North Korea may be one of the most infamously known to the world today because of its political issues in the global stages with its nuclear programs, but the country can be seen from a different angle and understood by many other measures such as its potential to be a valuable contributor to the world economy, social, and business, for example. The easiest measure of its potential is the proven records of success by its brothers and sisters in the South. As shown in a brief table below, the two Koreas since 1948 separation give dire differences between the two. Today their similarities end with the racial ethnicity and the size of land, but the differences begin with almost any aspects of the human lives.

The main purpose of the study is to identify the ways that the North Koreans as consumers adjust their lifestyle in the midst of difficult economic strains worsened by the prolonged sanctions imposed on by the United Nations from the existing economic hardships that was a level of extreme poverty prior to the sanctions imposed.

Justification of the Study

Table 1 shows how the two Koreas after seven decades of separation in 1948 became now so different in almost every aspect of social and economic indicators; North with the communist ideology and South with the democratic republic. In fact, right before separation with the 38th parallel line, North side of Korea was better situated with higher GDP per capita to be much stronger in terms of industrial bases of Korea with many of the abundant underground natural resources, while the South side of Korea simply had neither natural resource nor industrial foundations but a few light industries like textile because of its climate differences.

It is obvious today that South Korea is one of the nine most economically advanced countries in the world. North Korea's advantages over South Korea simply dissipated over the decades. The South's economy is 55 times larger in GDP and the South Koreans are 25 times richer than the North Koreans. Among the factors attributable to the rapid rise of the South Korean economy, the most outstanding are export-oriented economic policy, educational excellence, and strong desire to be successful.

Methodology of the Study

The sources of data and information of North Korea is as scarce as anyone can imagine. As of today, North Korea has no official diplomatic ties with the United States; Sweden serves as the protecting power for Australia, Canada, and the U.S. in North Korean territory (U.S. Department of State 2017) Few people know the truth about North Korea since the isolated state releases no information whatsoever to the outside world There are, however, three sources on which North Korean watchers can rely: (1) expatriates of North Korea who sought asylum by defecting to South Korea while on foreign assignment, (2) refugees from North Korea that left the country via secret routes in China for a better life, and (3) foreign diplomats and journalists officially invited by the state, who had direct contact with North Korea citizens.

Table 1. Comparison of North and South Korea Today

	North Korea	South Korea	N. Korea/S. Korea
Government Type	Dictatorship, Single-party state	Presidential republic, Two-party	
Land Size	120,408 sq km	96,929 sq km	<i>1.24 times of S. Korea</i>
Population	25.8 million	51.7 million	<i>50% of S. Korea</i>
GDP (PPP)	\$40 billion (2015)	\$2.188 trillion (2020)	<i>1.8% of S. Korea</i>
GDP per capita (PPP)	\$1,700 (2015)	\$42,300 (2020)	<i>4.0% of S. Korea</i>
Exports in US\$	\$222 million (2018)	\$606.7 billion (2020)	<i>0.0037% of S. Korea</i>
Import in US\$	\$2.32 billion	\$541.0 billion (2020)	<i>0.4288% of S. Korea</i>
Ethnicity	Homogeneous Koreans	Homogeneous Koreans	<i>Identical</i>
Language	Korean with Chinese & Russian taught widely	Korean with English taught widely required	<i>Chinese vs. English</i>
Religion	Buddhist Confucianist tradition	Christian 27.6% Buddhist 15.5% Confucianist tradition	<i>Eastern vs. Western Religion Dominating</i>
Urbanization	62.6% (2021)	81.4% (2021)	<i>77% of S. Korea</i>
Rate of Urbanization	0.85%	0.31%	<i>2.7 times of S. Korea</i>

Source: World Factbook at <https://www.cia.gov/the-world-factbook/>.

Notes: Though the year and date used in comparison are different between the two, North and South Korea, the impact is minimal because there has been little change in the overall status of the North Korean economy.

Three Basic Needs: Clothing, Food, and Housing

Under communism, all the property and economic resources are owned and controlled by the state rather than individual citizens, and the people are compensated or provided for based on their needs. In a pure communist society, the government provides most, or all clothing, food, and housing based on what it considers to be the needs of the people. The three; clothing, food, and housing are universal needs for human survival across the board. Persons need clothing for protection from the elements, need eating food to be nourished, and need housing as a shelter for security. Despite their life under communism, the reality is quite opposite because of the dire economic situation.

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