

**RENDEZVOUS UPON ICE:
HOW CANADA IS AIDING IN THE DEVELOPMENT OF
HOCKEY IN CHINA AHEAD OF THE 2022 WINTER OLYMPIC
GAMES**

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Abstract

Since the awarding of the 2022 Winter Olympic Games to Beijing in 2015, China has seen tremendous growth in the development of ice hockey in several regions of the nation. Being awarded the Olympic Games has often become a catalyst for the development of sports in many parts of the world, especially those areas which host the games. Since hockey in China is still underdeveloped and the nation is still somewhat new to this globalizing sport, they sought out the expertise of Canadians, who live in a country which is home to a rich hockey culture and impressive international hockey record in order to help them rapidly develop the sport. This research project seeks to understand the role Canadian actors are playing in the development of Chinese players both in Canada and in China using Global Production Network (GPN) theory to understand this phenomenon. The mutual cooperation between these two countries in regard to the development of hockey is hoped to lead the overall value enhancement of the sport in China. In addition, this project will also investigate how knowledge is transferred between Canadian and Chinese actors within this network using Knowledge Management theory in order to help us understand what knowledge transfer processes are at play as well as the strengths and weakness of knowledge transfer among actors. Finally, this project will investigate the globalization of hockey and how specifically it has globalized and spread to China in order to help us understand how the sport has developed in the nation over time.

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Chapter 1

Introduction

In 2015 the International Olympic Committee (IOC) awarded Beijing the right to host the 2022 Winter Olympic Games, beating its only competition, Almaty (the former capital of Kazakhstan) by 4 votes (Borden, 2015). This will make Beijing the first city in history to host both the Summer and Winter Olympic Games. Over the past decade in the lead up to these games, China has been expanding its winter sports programs and increasing the development of many of these sports. China has reached out to nations who have expertise in several winter sports to aid in the development of these sports in China ahead of 2022. The Chinese are investing heavily in hockey and are using outside expertise to aid in its development. This research project will examine the globalization of hockey as well as development of hockey in China ahead of the Winter Olympic Games. More specifically, this project will investigate how Canada is aiding in the development of the sport in China as China views Canada as a strong hockey nation with an impressive Olympic hockey record.

Since re-joining the Olympic Movement in 1979, China has seen tremendous growth of participants in Olympic sports. At the Summer Olympics they have gradually climbed up the gold medal charts in the 1990's and 2000's and by the 2008 Summer Olympics in Beijing they topped the medal table for the first time. This is something they hope to repeat in 2022 when the Olympics return to Beijing for the Winter Olympic Games. Due to heavy state funding by the General Administration of Sport in China (GAS) the growth of Olympic sports since 1979 and China's climb to Olympic success has been unprecedented. When it comes to the development of hockey in China, Canada has had a modest involvement since the 1970's. However, in the last decade, the relationship between the two nations has strengthened with actors often traveling

between the two nations to aid in the development of hockey in China. Canada has been aiding in this development on many fronts including training players, hosting exhibition games, starting leagues, training officials and building infrastructure. This continued until recently when political tensions between the two nations began to rise.

The research presented in the literature review examines how this development of hockey in China with the aid of Canadians is situated among academic research regarding Global Production Networks (GPN) and Knowledge Management theories. This will contribute to an understanding of the development of new geographic areas for player networks as well as how knowledge that is transferred between actors is aiding in the overall development of the sport in a new geographic area, China. These articles and further discussions and data will also allow us to understand how the sport of hockey has globalized from humble beginnings in Quebec to the global sport we see today that is expanding into new regions such as China.

The findings of this research project are presented in three chapters (4-6), each discussing a theme relating to the connections between Canada and China in regard to the development of hockey in China. These chapters examine how Canada is involved in the overall development of the sport in China ahead of the 2022 Winter Olympic Games in Beijing, while also contributing to an understanding of how the upcoming Olympic Games may provide a lasting sporting legacy in China as well as potentially creating new markets for hockey athletes in the future. Chapter four focuses on the development of hockey in China. Looking at the historical growth of western sports in China this chapter will provide an understanding of how the sport of hockey has become increasingly globalized. This chapter also investigates the growth of hockey players and venues in China using IIHF and interview data as well as examining how the awarding of the 2022 Winter Olympics to Beijing in 2015 has impacted this development. Finally, in order to

determine whether hockey in China is making gains, this chapter looks at the growth of hockey franchises and hockey leagues over the last 10 years.

Chapter five discusses the rise of global player production networks (GPPN) and applies this concept to the development of hockey players in China. Specifically, it explores how and why the Chinese are using Canadian expertise from coaches, officials, organizers and players in order to become a competitive hockey nation including the importing of Canadian hockey players with ethnic Chinese ancestry in order to help boost their teams for the upcoming Olympic Games. This chapter will also investigate the flow of athletes, coaches and officials from Canada to China as well as the development of Chinese amateur leagues by Canadians in the hope of understanding the contribution Canadians have made in the development of players and the sport in China.

The next chapter in this thesis will address the sharing of knowledge between actors involved in this GPPN linking Canada and China, in addition to discussing the successes and shortcomings of the knowledge transfer processes between these two countries. The transfer of knowledge from Canadian to Chinese actors plays an important role in understanding how Canada is involved in the development of the hockey in China over the last decade. The key concepts and theory behind the knowledge transfer process are applied to the case of hockey development involving Canadian and Chinese actors. This chapter also addresses cultural differences and language barriers potentially hindering this transfer of knowledge, and determine whether transferred knowledge has been interpreted usefully and can be used to facilitate the growth of the sport and its players in China.

The aim of this research project is to provide a better understanding on the relationship between China and Canada when it comes to the development of sports. This research project

will shed light on how the Olympic Games can be a catalyst for new sporting development in countries that host the games. This project will also show how mutual cooperation between countries (in this case Canada & China) can provide new sporting opportunities for people by expanding sporting markets to new geographical areas and open up new global player networks. This project also hopes to provide a clearer understanding on the globalization of hockey and more specifically, the spread and globalization of hockey into China. In addition, this project looks into how China is obtaining Canadian expertise and tapping into the Canadian player market in order to strengthen its hockey program ahead of the 2022 Winter Olympic Games. The following chapter will discuss some of the academic literature that provides the theoretical background for this thesis and will assess how Canada is aiding in the development of hockey in China ahead of the 2022 Winter Olympic Games.

Chapter 2

Literature Review

This research project relates the global player production networks of athletes connecting Canada and China to the overall development of hockey in China. There are three sections. The first section looks at the globalization of hockey as well as the development of the sport in China ahead of the 2022 Winter Olympic Games in Beijing. The second section addresses the theory of global production networks (GPNs), their development, related concepts, and how global player production networks (GPPN's) are a special case of GPNs. The third section discusses the theory of knowledge management, including its secondary concepts of production and sharing knowledge associated with hockey.

2.1 Globalization of Hockey

This section of the literature review examines the globalization of hockey, the growth of western sports in China, and specifically the growth and development of hockey in China. The sport of hockey has grown from a game on frozen ponds of Quebec to a global sport. This section will also describe how western sports have grown in China over the last 100 years and assess the cultural, political and infrastructural impacts associated with this. Specifically, how has hockey developed in China over the last few decades?

The sport involving hitting a ball or a puck with a long stick has been around for millennia. There is evidence that the Ancient Egyptians played a version of hockey (Hardy & Holman, 2018). The development of modern hockey began in the late 19th century throughout Europe and North America as a folk sport, most notably in Scotland and Canada (Hardy &

Holman, 2018). A folk sport is a sport played with loose rules or regulations for communal recreation, not for intense competition. Bandy, a sport that grew in popularity in England in the late 19th century, was a precursor to hockey (Hardy & Holman, 2018). Bandy has many similarities to hockey, including hitting a ball with a stick (Hardy & Holman, 2018). However, today bandy is not nearly as popular as hockey. Many sports that we have today started off as a cultural game played as a way to pass the time and are often bounded by geography. A key example of how geography limits sport would be hockey that needs a frozen surface which is not available in many places.

The development of hockey as a traditionally structured sport with rules and regulations started in the late 19th century in Canada (Hardy & Holman, 2018). The sport of hockey that developed in Canada began in Montreal during the late 1870's using elements of field hockey and lacrosse to become a more structured sport (Hardy & Holman, 2018). While some argue that Kingston, Ontario and Nova Scotia were the true home of hockey, the Montreal model became the most widely used (Hardy & Holman, 2018). In 1908 the International Ice Hockey Federation (IIHF) was founded as the Ligue International de Hockey sur Glace (LIHG) (changed to IIHF in 1954) and was key in promoting and developing the sport worldwide (Hardy & Holman, 2018). So much so that by 1930's, the sport had spread to Asia and Africa as the Japanese and South Africans had joined the LIHG (Hardy & Holman, 2018). In 1914, the Canadian amateur hockey association (CAHA) was founded to help promote the sport at the amateur level in the country and by 1917 the NHL, the league for professionals, had been founded in North America (Stevens, 2002). By 1942 the "Original Six" teams in the NHL were the Montreal Canadiens, the Boston Bruins, the New York Rangers, the Toronto Maple Leafs, the Chicago Black Hawks and the Detroit Red Wings (Stevens, 2002; Li & Nauright, 2018). International ice hockey

competitions using the Montreal model debuted at the 1920 Summer Olympics in Antwerp which became the pivotal moment in the expansion of hockey globally (Hardy & Holman, 2018). It was at these games the Canadian men's team won their first gold medal. China, on the other hand, did not participate (Hardy & Holman, 2018; Arnold, 1983). By 1926 there were four minor leagues on the North American continent showing just how quickly the sport has grown there (Hardy & Holdman, 2018).

The Winter Olympic Games made their debut in Chamonix 1924, and men's ice hockey competitions have been held during the winter games ever since (Arnold, 1983). Since the start of Olympic ice hockey during the summer games in Antwerp 1920, Canadian teams have achieved 22 medals in the men's competition including 9 gold (the most of any Olympic nation) (IOC, 2021). It was also at this time that the sport began expanding in European markets with national leagues being founded in England, Germany, France, Czechoslovakia, Sweden, Italy, Romania, Spain, and the USSR (Hardly & Holman, 2018). Between the two world wars and with the help of the IIHF, NHL, and the Olympic Games, the sport spread quickly through parts of the globe, specifically in countries that have winter climates. The sport continues to grow during the post war years. It was also at this time that the NHL became one of the most powerful sports organizations in North America (Stevens, 2002)

Beginning in the 1960's the government of Canada began to invest in the sport by passing numerous laws to aid in the development of the sport and to aid in the construction of related infrastructure (Stevens, 2002). Around this time there started to be strong divisions between the amateur and the professional game. The IIHF and Olympic Games promoted the amateur sport while the NHL focused on professional athletes. In the 1960's and 70's many nations such as Canada and Sweden started to fund professional hockey athletes in hopes that

they would be able to compete in international competition like the IIHF championships and the Olympic Games. At the time only amateur athletes were allowed to compete in the Olympics, thus the Canadian hockey players who trained professionally were unable to compete. It was also around this time that the USSR also began to train its “amateur” athletes and fund them for their talents (Soares, 2007). However, these athletes were able to compete in international competition because on paper they were technically employed as military personal and not professional athletes, even though the state paid for their athletic development in what Soares (2007) calls “Shamateur” athletics (p. 216). This was in strict contrast to the amateur rules of the Olympic Games and by 1970, Avery Brundage of the IOC strongly worked to prevent professional athletes from competing in the Olympic Games and stated that professionals who competed in the IIHF Championships would not be able to compete on Olympic ice (Hardy & Holman, 2018; Soares, 2007).

It was at this time that Canada had begun to be absent from international ice hockey competition including the IIHF Championships, the 1972 Olympic Winter Games in Sapporo and the 1976 Olympic Winter Games in Innsbruck (Kobierecki, 2016; Arnold, 1983). The Canadians decided to boycott these competitions as they wanted to use professional athletes in order to obtain better results in competition and believed it was unfair that the USSR was allowed to use these “shamateur” or pseudo-athletes in these competitions (Kobierecki, 2016; Soares, 2007: 216). It was also at this time that Hockey Canada was founded (1969), in order to aid in the development of a national team which is closely tied to the federal government and helps to promote the sport nationwide (Kobierecki, 2016; Stevens, 2002).

Relations between Canada and the USSR however were not strained, in fact they were in some ways improved. In 1971, Canadian Prime Minister Pierre Trudeau visited the Soviet Union

seeking to improve relations between the two countries in the middle of the Cold War. This resulted in economic cooperation between the two countries (Soares, 2007; Kobierecki, 2016). The following year became a pivotal moment in the globalization of the sport when the Soviet team came to Canada to play an exhibition style game in the “Summit Series” between 1972-1974 (Hardy & Holman, 2018). The team from the USSR came to Canada and played a series of exhibition games at the Maple Leaf Gardens in Toronto (Stevens, 2002; Hardy & Holman, 2018). During these games the Soviets and Canadian worked together to improve their skills and play against one another in “friendly” competition. The Canadians ended up winning the series but due to the series being played during the middle of the Cold War it became one of the most “intense and animosity-filled international series ever played” (Duhatschek et al., 1999: 101). These games also allowed the Soviet team to go beyond the iron curtain and experience elements of western culture while in Canada. Not only were these games beneficial to the Soviets but along with Canada Cup Tournaments in the 1970’s helped generate revenue for Canada (Stevens, 2002).

Women in North America have been playing the sport since the turn of the 20th century and by the 1920’s and 1930’s female clubs had begun popping up in France (Hardy & Holman, 2018). During the world wars however, the women’s sport almost disappeared and it was not until the revival of the Canadian women’s senior national championships in 1951 did the sport begin to pick up traction with women again (Hardy & Holman, 2018). By the 1970’s, often though grass roots movements, women’s amateur hockey associations, often attached to men’s organizations, began to arise in Canada, most notably the Canadian Women’s Hockey Association and the Ontario Women’s Hockey Association (Hardy & Holman, 2018). Throughout the 1980’s and 1990’s the globalization of both men’s and women’s hockey

continued to grow and at the 1998 Winter Olympic Games in Nagano, the female ice hockey competition finally made its debut (Hardy & Holman, 2018). The United States won gold at this competition; however, the Canadian women's team has since become the more successful with a total of 4 gold medals (compared to the US teams 2). The Chinese women's ice hockey team also made their debut at the 1998 Winter Olympic Games in Nagano placing 4th overall (their highest position to date) (IOC, 2021).

Today hockey is a truly global sport with many professional leagues often spanning international boundaries. By 2020, there were hockey leagues for both men and women in most of the major global hockey markets including Asia, Europe and North America. For example, the NHL is made up of 32 teams from across Canada and the United States. The International Central European Hockey League consists of teams from Austria, Italy, Slovenia, Czechia, and Hungary, while the KHL is made up of teams from Russia, Belarus, Croatia, Finland, Kazakhstan, Latvia, Slovakia and has even expanded into China (Li & Nauright, 2018).

Player Production in a Globalized World

A core element of this research paper is the production of hockey players and their trading as a commodity. Within the last few decades there have been several articles published which discuss global player production and how it relates to the globalization of sports (Andrews et al. 2014; Burnett, 2010; Carter, 2011; Cho et al. 2018; Darby, 2013; Elliott & Maguire, 2008; Esson, 2015; Maguire & Pearton, 2000; Maguire & Stead, 1998, Mountain, 2015; Decosse & Norcliffe, 2020; Chiba, 2014; Silva & Pietikäinen, 2018) & (Moret & Ohl, 2019). This literature will provide an understanding how research is currently being conducted in the field of

geography in relation to the globalization of sport, the global production of athletes and can provide insight on how the player and their skills can be a commodity.

Early work conducted in regard to the global production, distribution and migration of players often involved the migration of football players. Research done by Maguire & Stead (1998) and Maguire & Pearton (2000) both discuss the migration of elite football talent to and within Europe as a result of the globalization of the market. Maguire & Stead (1998) discusses the international movement among association football players specifically within the European Union (E.U.) and UEFA investigating how this growth has been facilitated by the sports globalization and the Bosman case by the European Union. The Bosman case was declared by the European Union in 1995 and allowed for the freedom of movement of athletes among E.U. countries (Maguire & Stead, 1998). The work done by Maguire & Pearton (2000) further investigates the migration of footballers in and to Europe following the 1998 FIFA World Cup. Specifically, this research investigates the tactics used by European nations and trends in recruiting indigenous football talent as well as identifying 'talent pipelines' between nations (Maguire & Pearton, 2000; 264). This article also investigates the growth of international talent into and between European nations following the World Cup and the Bosman case in 1995 (Maguire & Pearton, 2000).

Both Maguire & Stead (1998) and Maguire & Pearton (2000) use World Systems Theory introduced by Wallerstein (1979) as the theoretical base for explaining this network involving the globalization and migration of athletes. While still foundational to many works conducted involving global athletes' migration, some such as Carter (2011) have critiqued the use of this theory to explain patterns of global athlete labour migration. Carter (2011) claims the use of such network theories limits investigating how migrant athletes construct place and space at the local

as too much time is spent focusing on the global and the use of such theories limits our ability to understand the impact on migrant athletes from a more local perspective. Andrews et al. (2013) extend this discussion about localization in sports by focusing on the influence of the 2010 Commonwealth Games on the new emerging middle class in India. In this research, Andrews et al. (2013) claim that understanding of “the local” is often under discussed, finding this “perplexing” due to the localized manner in which sports are “performed and experienced” (p. 261). This research shows why it is important to understand both the global aspects associated with the globalization of sports but also the aspects of ‘glocalization’ as sports are imbedded at both the global and local levels (Andrews et al, 2013).

Recent research conducted in the area of global sports migration includes work done by Paul Darby (2013) and James Esson (2015) which focuses on the production of Ghanaian footballers and their desire to move into the major leagues of Europe. Paul Darby (2013) focuses specifically on using a global value chain (GVC) framework to understand the pattern of Ghanaian footballers moving to the big European leagues and the struggles they have to go through to get there. James Esson (2015) focuses on false hope given to many Ghanaian footballers as fake scouts (claiming to be a part of major European teams) provide them with opportunities just to be left in the dust after providing the scouts with large sums of money to help them get to the major European teams. This article sheds some negative light on a very real situation many footballers in the global south experience.

The article by Cora Burnett (2010) on the other hand discusses the opportunity sports can bring to a developing nation such as South Africa. In this article Burnett (2010) focuses on how the development of junior football leagues and infrastructure can provide children the opportunity to get off the streets and possibly make a career out of sport. Research conducted by

Cho et al. (2018) has focused on the migration of basketball players from the Taiwan (Republic of China; ROC) to the Peoples Republic of China (PRC). In this article, Cho et al. (2018) discusses the reasons for players migrating to the PRC as well as the impact this has had on the sport back in Taiwan. Cho et al. (2018) also discuss the political dynamics related to the migration of athletes due to political and diplomatic tensions between Taiwan and the PRC. This research has shown that the growing sports market in the PRC, notably basketball, has been able to attract talent from outside of its borders due to the competitiveness of the sport and the economic attractiveness of the PRC (Cho et al., 2018). While these articles do not involve the globalization of hockey or the development of hockey athletes, they do provide some insight into the world of sport and how athletes in general are produced, the struggles they face, the reasons for migration, and how proper facilities and development opportunities can enhance a player's ability on the field.

The remaining articles that were listed above, (Mountain, 2015; Decosse & Norcliffe, 2020; Elliott & Maguire, 2008; Chiba, 2014; Silva & Pietikäinen, 2018), & (Moret & Ohl, 2019), are all associated in some way with hockey player production and migration and are more directly related to this project as these articles are directly linked to hockey. The first three articles by Mountain (2015), Decosse & Norcliffe (2020) and Chiba (2014), all involve either the migration of players in and out of Canada or the production of players within Canada. The first article discusses the migration of young professional hockey players in Ontario to other markets (Mountain, 2015) while the second article discusses the production of elite hockey players in British Columbia (Decosse & Norcliffe, 2020) while the third and fourth article discusses migratory patterns of athletes and talent from Canada to Britain and Japan (Elliott & Maguire, 2008; Chiba, 2014). These articles provide some context for the ways in which hockey athletes

migrate from one team or country to another, the reasons why they do so, and how they are produced at the local and elite level of the sport. The remaining two articles by Silva & Pietikäinen (2018) and Moret & Ohl (2019) discuss aspects of elite hockey networks such as the migration of foreign captains and the career and educational path of youth players in Switzerland. All of these articles to some extent will be helpful for this project as they provide context for athlete migration patterns throughout the hockey world.

Mountain (2015) discusses the professionalization of youth hockey players in Ontario through an historical lens. This article also provides a methodology on how historical data is used to understand the globalization of the sport, as well as how international youth players move to Canada to play hockey and the internal migration of youth players within Canada. While this article is very brief, it still provides some excellent insight on the globalization of hockey within Canada and the globalization of the sport as a whole from a historical perspective. The article by Decosse & Norcliffe (2020) investigates the production of elite hockey talent in British Columbia. High performance training centres in British Columbia provide an expensive alternative to traditional hockey training, shifting player development from the local level to a regional level. Students at these centres become more skilled with elite training, increasing their chances of being recruited by a professional league. The research conducted by Decosse & Norcliffe (2020) fuses the concepts of GPN with the production of hockey players.

Research conducted by Elliott & Maguire (2008), has also focused on Canadian player migration. However, this research focuses on the migration of Canadian players and coaches to the British Professional Hockey league System. In this article Elliott & Maguire (2008) explain how, and why the British are tapping into this market as well as the impact this network has had on the British professional hockey league system. Elliott & Maguire (2008) also discuss how

hiring Canadians has opened up a new network of talent and knowledge as they found Canadians to have many connections back in Canada that have benefited the sport in Britain. The article by Naoki Chiba (2014) also addresses the globalization of Canadian hockey athletes. However, this article specifically focuses on Japanese Canadians and Americans immigrating back to Japan in order to play in the Japanese Hockey League. This article provides examples on how athletes with Japanese ancestry in North America move to Japan in order to not only play hockey and to an extent develop the program there, but also as a way for them to connect to their heritage. This article will be useful for this project as it helps explain why Canadian players with ethnically diverse background may choose to play in international leagues in which they have some ethnic connection. Canada has a large Chinese population, especially in Toronto and Vancouver.

Recently, China has been trying to recruit ethnic Chinese Canadians from these cities in hopes of obtaining better players for its national teams (Li & Nauright, 2018). Many of these ethnically Chinese players may choose to play for China for the same reasons mentioned in Chiba (2014).

The remaining two articles (Silva & Pietikäinen, 2018) and (Moret & Ohl, 2019) both discuss the migration and the career paths of elite hockey players in European and North American markets. The article by Silva & Pietikäinen (2018) specifically discusses the migration of foreign captains in elite hockey markets from Finland, Canada and the United States. In this article the authors discuss the career changes these athletes face as they get older and how they migrate to new markets in order to keep playing the game and earn an income doing what they love, the 'routes' they take and the 'roots' they make in their new homes. This article will be useful for this research project as it helps us understand the career paths of elite hockey players as well as how they adapt to new cultures and ways of life. The article by Moret and Ohl (2019) on the other hand addresses career paths of youth hockey players in Switzerland and the

influence their parents make on whether they should focus on sport or education. This article provides an understanding of how parents perceive the success of the elite hockey program in Switzerland and the opportunities and chances their kids have at making it to the big leagues. The importance of this article to this research project is that it shows us how parents have a major influence on the career path of their kids, especially when it comes to elite sports as there is a low probability that their kids will make it to the top leagues in Europe or beyond. This allows us to understand the highly competitive nature of athletes in the sport as only the best are able to make it to the top leagues of the world.

2.2 Global Production Networks

The concept of a global production network (GPN) has been discussed and researched by economic geographers for about 20 years. The theory developed out of World Systems Theory introduced by Wallerstein (1974) and evolved by the 1980s into the concept of global commodity chains (GCC) and then in the 1990s into global value chains (Gereffi, 2014). Beginning in the early 2000's the concept of global production networks was first developed as a response to some of the conceptual shortcomings of both global commodity chains and global value chains.

World systems theory (WST) was proposed by Immanuel Wallerstein in 1974 and can most easily be described as a state-centred system in which a 'variety of different national economies are intertwined and organized into 3 specific categories: core, semi-periphery, and periphery' (Wallerstein, 2010; Coe & Yeung, 2015). These categories are dependent on one another. For example, a core economy is dependent on the economies of the semi-peripheral and peripheral countries with which it has relations for resource inputs and labour (Bartlet & Prica, 2017).

Henderson et al. (2002: 437) goes on to state that ‘the national state is the main unit of analysis for studying a majority of the world’s economy’ in this theory.

While WST has been able to provide a framework for researching a state’s central role in economic development, as well as its impact on semi-peripheral and peripheral nations, Henderson et al. (2002: 111) argue that WST still lacks the ability to tackle contemporary problems. They state: “limited attention to this level of aggregation has become less useful due to the current changes happening in the organization of economic activity which in turn looks to go beyond the state boundary yet still being confined within it”. WST also aided in interpretation of the new international division of labour. The new international division of labour (NIDL) can be defined as economic activity geographically dispersed around the globe whose goal is to exploit differences in the cost of production at different locations (Marin, 2006). Recently, some have even related this theory to the world of sports with the production of football athletes. The work of Poli (2010) focuses on the migratory patterns of football players and relates it to the overall globalization and connectedness of the global economy. However, both WST and the NIDL have their shortcomings. This is where global commodity chain theory comes in to play by avoiding some of the limitations, specifically the central role of the state and limits its ability to go beyond state boundaries.

Sociologists Gereffi and Korzeniewicz (1994) helped global commodity chain (GCC) theory gain momentum using Wallerstein’s (1974) WST as its base and with substantial research existing in this theory still occurring (Coe & Yeung 2015). Global commodity chains can be defined as the ‘Interorganizational networks clustered around a single commodity or product that links household, firms, enterprises and the state together across the global economy’ (Coe & Yeung 2015: 9). However, this theory still does not go beyond the national scale of economic

development just like WST as much of the trade data used is collected at the state level.

Therefore, the geographical understandings and the importance of the local and the global scales of regional economic development are underdeveloped (Coe & Yeung 2015).

Developed shortly after the concept of global commodity chains (GCC), and with a lot of similarities came the development of global value chains (GVC). These chains, (GVC), can be described as “an organizational arrangement, comprising interconnected economic and non-economic actors, coordinated by a global lead firm, and producing goods and services across multiple geographical locations for worldwide markets” (Coe & Yeung, 2015, p. 2). Local supply chains and global sales linkages also play a role in GVC’s which is also a key element of GPN’s. Existing literature on GVC's tends to focus on certain themes such as capitalist relations and uneven development. Another theme of the GVC concept is that it focuses on government structures and key actors, often excluding the actions of other secondary actors (Coe & Yeung, 2015).

Other limitations of the GVC is that it focuses too much on the global impacts, not so much on the impacts at the local or regional level and that it focuses too much on the commodity and not enough time is spent investigating the actors at play in this commodity chain (Coe & Yeung, 2015). Darby (2013:45) states the GVC approach tends to “oversimplify the distribution power of the world economy” and that critical theory is often absent from this concept. Both Wallerstein’s WST and the NIDL were developed out of Marxist theory and lack discussion about investments and capital. The GVC also allows us to locate different steps in a production chain dispersed across many geographic regions and relating it back to the core, periphery and semi periphery concepts of WST. This leads GVC theory to be linear and unidirectional in its flow and tends to have a ‘top-down’ approach by looking at lead firms at the top and suppliers at

the bottom of this chain (Darby, 2013). The absence of this critical theory in GVC is what led to the development of the global production network framework in the late 1990's and early 2000's (Coe & Yeung, 2015).

Global production networks (GPNs) have been a key element of academic research not just in geography but also in development studies and sociology (Werner, 2016). This has led to the development of many perspectives across the disciplines concerning GPNs. In the field of geography, the theory of GPNs developed mainly out of the Manchester/Singapore school of economic geographers (Coe, 2009; Rainnie et al., 2011; Yeung & Coe, 2014; Werner, 2016). According to Yeung and Coe (2014:29) GPNs “are organizational platforms through which actors in different regional and national economies compete and cooperate for a greater share of value creation, transformation, and capture through geographically dispersed economic activity”. These networks often have a lead firm that produces “goods and services across multiple geographic locations for worldwide markets” (Coe & Yeung, 2015, p. 2). Central to this idea is not only the lead firm itself, but also the arrangement of firms, institutions and actors that produce goods and services across these locations (Werner, 2016). In contrast to GVC, the GPN framework is more horizontal and looks at linear connections and multi-dimensional power relations (Coe et al., 2008; Coe & Hess, 2013). According to Henderson et al. (2002) placing emphasis on the ‘social process’ which are involved in the production of goods and services as well as the ‘reproduction of knowledge, capital and labour’ plays a key role in the global production network.

Unlike the GVC framework, the GPN framework focuses on inter-firm relations within a production network and argues that these relationships are influenced by factors outside of the network (Navdi et al., 2011). According to Darby (2013) GPN is a more ‘bottom up’ approach to

research that looks at the social political and cultural contexts of production networks in contrast to the ‘top down’ approach of the GVC framework that looks at production networks from the lead firm first and ending with the suppliers. A bottom-up approach allows researchers to investigate diverse forms of both equity and non-equitable relationships sometimes embedded within the local, national, or regional contexts (Manzenreiter, 2013). Overall, GPNs go beyond the trading of tasks and outsourcing to other areas and instead focuses on the strategies of coordination and cooperation in which these networks of actors are managed, sustained, and constructed (Coe & Yeung, 2015). Social political and cultural contexts as well as inter-firm/inter-institution relations are key to this research project as the development of hockey in China is mainly state sponsored with power relegated to the GAS, and is influenced by many different actors, including Canadian.

Some of the secondary concepts of GPNs will also be used in this research project, including the concepts of societal embeddedness, territorial embeddedness, and their relationship with global production networks. The first element focuses on specific actors from multiple locations and their connectedness, as well as how they relate to the GPN framework. For this project the actors I will be investigating include numerous organizations across Canada and China that are involved with the development of hockey in China ahead of the 2022 Winter Olympic Games. GPNs are the organizational arrangement of actors involved in both economic and non-economic processes (Coe & Yeung, 2015). The presence of both economic and non-economic actors makes GPNs diverse. While a lead firm is normally central to the analysis of GPNs, it is the relationships between actors which keeps this network “bound together” through the “multiple geographic location” (Coe & Yeung, 2015, p. 2; Dickens et al., 2002; Bathelt & Glücker, 2003). This also relates to the relational economy in which actors are influenced by

social and institutional relations, economic processes which are often defined by their history, and finally the openness of strategies and actions of the actors within this process (Bathelt & Glücker, 2003). The use and treatment of both economic and non-economic actors in GPNs is important to this research project as multiple actors from both groups across Canada and China are aiding in the development of hockey in China.

The involvement of a lead firm driving a global production network is also an important factor. Lead firms are driven by three main factors: cost, flexibility, and speed (Coe & Yeung, 2015). Lead firms are often interested in minimizing costs, particularly production costs, which often leads to outsourcing of production (Coe & Yeung, 2015). Lead firms are also interested in the flexibility of the network and the speed in which a service can be provided (Coe & Yeung, 2015). It is these differences that Henderson et al. (2002) claim will have a significant impact on the way a GPN is constructed, as these differences are often rooted in managerial practices, nature of ownership and the firm's evolution.

Lead firms often own recognizable brands and are driven by multiple factors including, cost, flexibility, innovation, intellectual property, and speed in relation to time to market (Coe & Yeung, 2015). For this paper the lead firm in China is the state as the development of sports is led by the central government. China has a state centred economic system with a socialist market economy with some elements of capitalism established by Deng Xiaoping in 1979 (Tan, 2012). The central government (the Communist Party of China - CPC) therefore leads economic development in China. The government then delegates its power to smaller state organizations like the GAS which is leading the development of sports in China (Zhouxiang, 2013). The GAS further delegates its power to other firms including national sport management centres (NSMC) who aid in the training and govern domestic sport competitions, all while maintaining control of

the overall development of the sports (Tan & Houlihan, 2012). The NSMC's work with the non-governmental national sport associations (NSA) who have a similar structure to western sport federations to aid in the promotion of sport in China and further the development of many sports including hockey (Tan & Houlihan, 2012). The state also plays a large role in the corporate sector within China as well. In addition, firms with a blend of public, private investment are also driving the development of hockey in China ahead of the 2022 Winter Olympic Games, but to a lesser extent than the GAS.

The concept of inter-firm coordination also plays a role in this GPN. Inter-firm coordination occurs when a lead firm's value activity is consolidated and internalized between partner firms which span international borders (Yeung and Coe, 2014). This often results in higher quality of production, lower costs, and quicker response to market demands due to the very specific and often strategic partnerships between firms found in the GPN (Yeung & Coe, 2014). Many processes, especially internationalization and domestic expansion within the GPN (Yeung & Coe, 2014), aid the creation and capture of value found in the internalization process. This process also leads to new markets emerging as firms are constantly looking for new profits, which aids in keeping the overall industry 'unsaturated' (Yeung & Coe, 2014). Inter-firm partnerships, which Yeung and Coe (2014, p. 49) define as 'The collaboration, coevolution, and joint development between a lead firm and its strategic partners who compete against other firms and networks within the same GPN' is important to the understanding of the GPN this project seeks to investigate. Both firms, actors within those firms, and their inter-firm coordination and partnerships, play a key role as many firms are involved in the production of players and the development of hockey in China, aided by Canadians. Actors and firms across both countries,

including actors from within the economic and non-economic sectors who aid in this development, were interviewed and provide the foundation for much of this research.

Three key elements of value creation will be addressed. These are the concepts of value enhancement, value capture and surplus value. Value enhancement occurs when firms involved in a GPN ‘process’ and ‘transfer’ knowledge that leads them to capture value from one another and enhance their own firm (Coe & Yeung, 2015; Henderson et al., 2002; Coe, 2009). This transfer of knowledge can occur within the firm itself or from the transfer of actors and players from other firms who bring new knowledge with them to the new firm. In turn, this also influences regional institutions and governmental agencies, or other firms involved in the GPN (Coe, 2009). Coe & Hess (2013) also point out that value creation and enhancement within a GPN have the potential to capture value in different forms of rent. This depends on whether firms can maintain stability within the regions and continue to produce value (Coe & Hess, 2013). In relation to this project China is trying to enhance the value of its hockey programs and capture that value by collaborating with Canadian experts as Canada already has value when it comes to hockey, as seen by its impressive Olympic record. China hopes one day to compete with Canada for value from hockey.

In addition to value enhancement and value capture, surplus value also plays a role in this development. Surplus value in a GPN involves the value created through “converting labour power into products and services to be exchanged for more than the labour value embedded in those commodities” (Coe & Yeung, 2015; 17). Surplus value can also be found in the production of hockey athletes in China as they have the potential to provide additional economic benefits and have the potential to create surplus value well beyond 2022 based on their success. Global attention and increased media focus have helped the Olympic Games to become a recognized

monopolistic brand generating a scarcity rent that helps to sustain the games and – if they generate a surplus - the cities that host them. Branded entities such as the Olympic Games, or prominent athletes, also have the potential to create surplus value through increased tourism after the games thanks to the increased exposure of the city, region and even a player receives. This occurred in Barcelona and London after the 1992 and 2012 Olympic Games. The 2022 Winter Olympic Games in Beijing may also receive the same type of benefits in surplus value due to the awareness brought by the development of China's new winter sports venues. In time this can lead to an increased interest in winter sports and eventually can help these sports, specifically hockey in this case, to become more profitable after the Games in China.

Rent on the other hand can be created in a setting in which a firm has access to scarce resources that protect it from competition by creating obstacles for competing firms (Coe & Yeung, 2015; Coe, 2009). This project will be focusing on three elements of rent including, human resource rent, brand rents and 'relational rents' (Coe & Yeung, 2015; Henderson et al., 2002). Human resource rent is obtained through human labour or talent as opposed to brand rents, which occurs in the establishment of 'brand-name prominence' in which purchasers pay extra amounts for specific brands in major markets (Coe & Yeung, 2015; Henderson et al., 2002; Satyaki, 2017). Relational rents arise from inter-firm relations that are linked to the "management of production" and form "clusters of small to medium sized enterprises" linked by production (Henderson et al. 2002, p. 449; Coe & Yeung, 2015). The relations that form are a key element of relational rents and help to create surplus within these firms due to the scarcity of competition. This form of rent also relates to the concept of the relational economy as this process is dependent on the often open-ended strategies and actions of the actors within these partnerships (Bathelt & Glücker, 2003). In the case of hockey, rent is generated by the scarce

skilled labour of actors involved in this GPN. The knowledge they share to develop hockey boosts revenues and the implicit value that China places on a strong performance by their national teams in 2022.

The final theme included in this discussion of GPNs is the distribution of power within a GPN. In GPNs the concept of power is defined as “the ability of one actor to affect the behaviour of another actor in a manner contrary to the second actors’ interest” (Coe & Yeung, 2015, p. 17). Power plays a key role in the development and advancement of the GPNs as powerful actors with access to proper resources within these networks often lead the network (Dicken et al., 2001). The power of actors within a GPN is often dependent on what assets each of the actors possesses and how access to these assets can be controlled (Coe et al., 2008). For example, in international hockey Canada has become a powerful nation because it has an abundance of hockey resources and assets in addition to strong cultural connections to the sport. However, China holds the power when it come to the development of Chinese hockey as the state is the organization driving its development.

Henderson et al. (2002) elaborates on this concept of power and introduce 3 distinct types of power - corporate power, collective power and institutional power. Corporate power is when a lead firm within a GPN has enough “capacity to influence decisions” over other firms (Henderson et al, 2002, p. 450). Collective power refers to the ‘collaborative actions between agents within a GPN who seek to influence company, governments and international agencies’ (Henderson et al. 2002: 451). These concepts of power in a GPN, corporate power, collective power, and institutional power are important to this research project as the corporations and actors at play (specifically in Canada) are able to influence the development of hockey in China. Collective power is also an important feature of this project as hockey firms seek collectively to

influence the development of hockey in China. Finally, institutional power exerted by the state and non-state sponsored institutions influences other firms in the GPN (Henderson et al, 2002). This project examines which institutions (including the GAS, IIHF, and various Chinese and Canadian organizations) are significant in the development of hockey in China ahead of the 2022 Winter Olympic Games.

Secondary GPN concepts to be discussed include societal embeddedness and territorial embeddedness. The locations in which actors originate often influence the functioning of GPNs. When these actors and their firms start to branch out into new international markets, they bring some of their cultural and historical customs established at their home base with them. These customs become an important influence on how they operate in new locations (Coe, 2009; Coe et al. 2008; Coe & Yeung, 2015). This is called societal embeddedness. Territorial embeddedness on the other hand describes how ‘firms and other related organizations’ within the GPN are ‘anchored’ into different places and how they become embedded in social dynamics and economic activities (Coe, 2009; Yeung & Coe, 2015). In turn, the location of lead firms in new geographic locations can lead to “new local and regional networks of economic and social relations” which helps the networks, firms and actors grow (Henderson et al., 2002: 452). Due to their distinct cultures, histories, and economies, both societal embeddedness and territorial embeddedness will play an important role in this research project.

Discussion of labour in GPNs has been relatively absent until recently (Carswell & Neve, 2013). However, since the early 2010’s there has been a growth in the scholarly work about labour and development within GPNs (Coe & Hess, 2013). Rainnie et al. (2011) and McGrath-Champ et al. (2015) argue that a lot of GPN research has avoided discussion of the impact on labour and employment relations. According to Rainnie et al. (2011), GPNs have failed to

consider labour as an active participant and help to shape the structure and geographical organization of the network. McGrath-Champ (2015) goes further, claiming that locating the potential and in turn value in employment relations, labour and its accompanying processes should be central to the analysis of GPNs. Carswell and Neve (2013) claim that agency found within labour can produce ‘transformative effects’ on the lives, social relations, and reproductive capacities of workers in GPNs. It is important to acknowledge the impact all aspects of labour have on GPNs.

Recently there has been much work done in relation to labour’s role in GPNs specifically in terms of labour migration. Some of this work includes the GPNs associated with IT labour migrating out of India (Xiang, 2007), GPNs associated with nurse migration, also out of India (Walton-Roberts, 2012), and the migration of youth football players out of Ghana (Darby, 2013). In Xiang (2007), the author discusses the impact on labour migration in the IT Industry in India. This book talks about the high demand for IT labour outside of India and how people are being ‘body shopped’ to a global market due to their high demand (Xiang, 2007). Walton-Roberts (2012) discusses the growing opportunities for nurses to migrate out of India due to the type of labour specific stereotypes they face within the GPN which makes them a desired labour force. Darby’s research (2013) is the most relevant to this research project as it relates to the migration of athletes in a GPN. In this article Darby (2013) examines the experiences of Ghanaian footballers and the types of hardships they face trying to make it to the big European leagues. Darby specifically describes the GPN of these athletes and the potential for them to export their labour to other more higher paying markets outside of Ghana.

There has also recently been research on the growth of manufacturing in China and specifically the growth of the sporting goods industry. The growth of manufacturing industry in

China and their related GPNs has been highlighted by academics such as Manzenreiter (2013 & 2014), Nadvi et al. (2011), and Gao et al, (2017). The article by Manzenreiter (2013) discusses the GPN associated with sporting goods manufacturing in Southeast Asia and its associated labour processes. This article also discusses the growth of this sector as well as its effects on labour such as higher wages due to China's rapid economic growth (Manzenreiter, 2013). Manzenreiter (2014) explores the shift in sports manufacturing and investment from other parts of Asia into the Chinese manufacturing sector due to lower standards in working conditions and cheaper labour. Nadvi et al. (2011) also discuss the growth of the sporting goods industry in China and its impact on labour. However, this article's focus on labour conditions found within this manufacturing industry and pressure from other countries within the GPN for more humane working conditions (Nadvi et al., 2011). The growth of this manufacturing industry in China is also highlighted beyond the sporting industry in an article by Gao et al, (2017) in which the authors discuss the growth of a notebook computer manufacturing cluster in Chongqing and the complexities surrounding this GPN.

Finally, Decosse & Norcliffe (2020) connect GPN theory to the production of elite Canadian hockey athletes in high performance training centres in British Columbia. This production of athletes in GPNs they call global player production networks (GPPN's) and focuses on 'the training and trading of elite athletes in many sports that has evolved over time at the international scale' (Decosse & Norcliffe, 2020: 121). This work by Decosse & Norcliffe (2020) explains how players are produced in elite training facilities in hopes of obtaining a professional career in the sport. The research conducted by Decosse & Norcliffe (2020) along with this current research project will be used to further the development of GPPN theory by

specifically investigating the GPPN of hockey athletes between two countries (Canada and China) ahead of a mega international sporting event (the 2022 Winter Olympic Games).

For this project, labour is conceptualized as a resource from which rent can be extracted. The sharing of knowledge and expertise among actors in different settings can lead to increased value in the Chinese hockey market. Skilled players are a scarce resource from which rent is extracted: exhibition camps and training camps increase the skills of Chinese actors in hopes of increasing the value of hockey in China. Bodies on both sides of this GPN benefit from this interaction of players, officials, and coaches.

Canadian actors who go to China to help develop hockey play a key role in this research project. They play many roles including as coaches, officials and organizers. The skills and knowledge these actors possess are commodifiable and tradeable and help to enhance the value of hockey in China. Players also contribute to this development, mostly through relocation as many athletes who were born in Canada of Chinese descent have relocated to China to play hockey there and obtain citizenship. Unlike what was seen in Darby (2013) in which players immigrate to more profitable markets, this project looks at why these Canadians of Chinese descent are coming to China to aid in the development of hockey when it is not as remunerative a market when compared with the NHL or KHL.

2.3 Knowledge Management

Like GPNs, the theory of knowledge management includes many concepts that aid in the understanding of knowledge production, conversion and transfer. The sharing of knowledge through proper knowledge management can help facilitate growth and development.

Knowledge management is defined as the “Institutional systematic effort to capitalize and cultivate knowledge” (Serban & Luan, 2002, p. 5). Once this knowledge is collected, it can then be “converted” into new knowledge and possibly transferred or “shared” between individuals, groups or teams (Nonaka, 1994; Nonaka & Krogh, 2009). The role of the individual is key as the individual is the one who creates knowledge (Nonaka, 1994). This research project will look at how knowledge management can be used with GPNs to aid in the transfer or “sharing” of knowledge associated with hockey that has been cultivated in Canada for over a century and also how this knowledge is being used to develop the sport in China. It is important to provide some background and discuss some of the concepts that make up knowledge management and how they relate to the overall project.

Starting in the 1990’s the field of knowledge management (KM) and production began to gain popularity in the business, science and academic world with conferences dedicated to knowledge management, with journals and with consulting firms aiding in the creation of business opportunities (Serban & Luan, 2002; Hildreth & Kimble, 2002). Ikujiro Nonaka’s work on the “Theory of Organizational Knowledge Creation” (1994) became a crucial development in the growing field of knowledge management and the production of knowledge. According to Nonaka and Krogh (2009, p. 635), the theory of organizational knowledge creation is ‘a process in which an individual makes knowledge available and is able to share or ‘amplify’ that knowledge that has been created individually’. This creation of knowledge can occur in many different ways such as discovery or discussions (Serban & Luan, 2002).

The work of Polanyi (1966) and his theory of tacit and explicit knowledge played a major role in the development of Nonaka’s (1994) *Theory of Organizational Creation*. The process of knowledge creation is dependent on the distinctions that arise from these two forms of

knowledge, explicit or codified knowledge, and tacit knowledge, which is less easy to codify (Nonaka, 1994; Serban & Luan, 2002). Both explicit and tacit forms of knowledge relate to how an individual produces their own knowledge. Explicit knowledge can be defined as knowledge that can be codified and is transferable through systematic languages and is often stored in the form of records, archives and documents or can be stored mentally and become “accessible through consciousness” (Nonaka, 1994; Nonaka & Krogh, 2009 p. 636). Explicit knowledge therefore is easy to transfer. Tacit knowledge on the other hand is more personal and much harder to transfer due to it being rooted in “action, commitment and specific context” and is related to skills, jobs, physical experiences, senses and intuition which are difficult to codify (Nonaka, 1994, p. 16; Nonaka & Krogh, 2009; Serban & Luan, 2002).

Both tacit and explicit knowledge play a role in knowledge creation and are sometimes complementary (Nonaka, 1994). However, for this paper I will be focusing on the tacit knowledge element as this is the type of knowledge that is believed to be most useful in understanding the transfer of skills and knowledge from Canadian to Chinese hockey players, officials, coaches and other members of this GPN. Tacit knowledge involves individualized knowledge related to a set of skills, jobs, intuitions and physical experiences (Nonaka, 1994, p. 16; Nonaka & Krogh, 2009; Serban & Luan, 2002). These traits are not only crucial to the understanding of tacit knowledge, but they also play a key role in the development of sports as athletes, coaches, and other members of this GPN each have a certain set of individualized skills, and experiences based on many different factors.

Knowledge creation theory describes the interactions between both explicit and tacit knowledge: it can mutually enhance elements of both forms of knowledge (Nonaka & Krogh, 2009). Knowledge that circulates between both the tacit and the explicit can give rise to new

forms of each type of knowledge (Nonaka & Krogh, 2009). Nonaka (1994) discusses four modes in which tacit and explicit knowledge can be converted and eventually shared. These are socialization, combination, internalization and externalization. The first two of these processes, socialization and combination, involve the conversion of either tacit knowledge to tacit knowledge or explicit knowledge to explicit knowledge. The later two processes, internalization and externalization, involve the process of converting tacit knowledge into explicit knowledge and explicit knowledge into tacit knowledge. These later two processes show how both explicit and tacit knowledge are complimentary to one another (Nonaka, 1994).

The process of socialization involves the conversion of tacit knowledge to tacit knowledge through interactions such as ‘observation, imitation, or practice’ (Nonaka, 1994; Hildreth & Kimble, 2002). An example of this type of knowledge conversion could be the sharing of skills by means of an apprenticeship or, for this study, the sharing of skills on the ice between Canadian and Chinese hockey players. The next process, combination, occurs when explicit knowledge is converted to more explicit knowledge through social processes such as telephone conversations, meetings or social gatherings (Nonaka, 1994). This process involves the transfer of explicit knowledge from one individual to be added, sorted or combined to the explicit knowledge of another (Hildreth & Kimble, 2002). This explicit or ‘embodied knowledge’ (Nonaka & Krogh, 2009) can help transform and enrich knowledge. However, its transfer or sharing in the combination process may be hindered by linguistic, cultural and conceptual differences (Nonaka & Krogh, 2009).

The next two processes, internalization and externalization, involve the process of converting either explicit knowledge into tacit knowledge or tacit knowledge into explicit knowledge. The first of these processes, internalization, occurs when explicit knowledge such as

documents or texts are transferred into tacit knowledge (Nonaka, 1994; Hildreth & Kimble, 2002). The new information or explicit knowledge they obtain from that book will be combined and situated with the tacit knowledge that individual already possess, creating new tacit knowledge. New explicit knowledge that is discovered is combined with the tacit knowledge one already possesses to create new tacit knowledge. In sports, this new crystalized knowledge acquired can then be used to further a player's development. The internalization of explicit knowledge and its conversion into tacit knowledge is fundamental to learning about any sport.

The last process that occurs in knowledge conversion is externalization. The process of externalization occurs when tacit knowledge is converted into explicit knowledge (Nonaka, 1994). This process of knowledge conversion is stimulated and occurs over time through mutual interactions between individuals through dialogue and 'collective reflection' (Nonaka, 1994; Hildreth & Kimble, 2002). According to Nonaka (1994), even though tacit knowledge found in the individual plays a crucial role in the production of knowledge creation, the process of externalization of this knowledge helps us to understand the benefits of knowledge creation and transfer of tacit knowledge. Geographical understandings are particularly relevant to the process of knowledge sharing.

Social interaction also plays a major role in the formulation of knowledge creation (Nonaka, 1994). Organizations, firms, and GPNs facilitate the creation of spaces where a collaborative knowledge sharing process by individuals with similar goals takes place. This environment allows individuals to share their sometimes difficult to translate tacit knowledge and in turn help others create knowledge from their own experiences or skills: as Nonaka (1994: 22) states, 'knowledge of 'experience and rationality and the interactions between the two allows individuals to build new perspectives'. However, these personal perspectives remain useless

without the help of social interaction to express and share them (Nonaka, 1994). Elements that aid in the knowledge sharing process include, sharing experiences, conceptualization, crystallization and collaboration (Nonaka, 1994; Serban & Luan, 2002).

The first of these elements, sharing experiences, allows individuals with shared perspectives to facilitate the creation of “common perspectives” (Nonaka, 1994: 24). In turn, this new knowledge can be shared with other members of a team or GPN to facilitate growth. Tacit knowledge can be hard to articulate sometimes, specifically as explicit concepts (Nonaka, 1994). These barriers can be overcome by collaborating with individuals who share experiences. The second element, conceptualization, is aided through direct interaction between individuals who often have shared experiences (Nonaka, 1994). Conceptualization through continuous dialog can directly facilitate and activate the externalization process at the individual level (Nonaka, 1994). Communication and conceptualization at the individual ‘face to face’ level as well as the cooperation or collaboration with others can aid in the building of concepts and ideas (Nonaka, 1994). The process of conceptualization and creating new perspectives can, however, come with some excess baggage in the form of redundant information. The third element, the process of crystallization can be described as a social process that occurs at the collective level (Nonaka, 1994). This process creates new knowledge that is better understood at the individual level.

These three processes mentioned above are crucial in understanding how knowledge is shared at both the individual and collective level. However, the final element of knowledge sharing, collaboration, may be the most important. The concept of collaboration was absent from discussions of knowledge management until the early 2000’s (Serban & Luan, 2002). Collaborating and sharing knowledge and experiences is important to the development of firms, teams and GPNs: the knowledge that is converted, learned and shared can be used to facilitate

growth in many parts of the GPN. Collaboration allows individuals to work together toward a solution to a problem that may be common across the GPN.

The theory of communities of practice is another way of sharing knowledge. This idea was formulated in the early 90's by Brown and Duguid (1991) as a way of organizing and sharing knowledge among members of a community. They describe communities of practice as “unifying unit of analysis for understanding knowledge in a firm” (Brown & Duguid, 2001: 198). These communities reflect how people actually work and try to solve problems through collaborative and communitive discussion (Nonaka, 1994). According to Hildreth and Kimble (2002), communities of practice form when individuals and groups create an environment that can foster individual knowledge development through interaction. This process also establishes an environment where knowledge that is created can be ‘nurtured and shared’ (Hildreth & Kimble, 2002).

Brown and Duguid (2001) claim that these communities can be significant in the “development, maintenance and reproduction of knowledge” (p. 202). They also propose that collaboration is a key element in communities of practice as it can help communities (especially those with shared experience or knowledge) solve problems and work out a solution together, very similar to the collaborative aspect proposed by Serban & Lund (2002) in relation to Nonaka's (1994) theory of organizational management. This form of knowledge organization and sharing through communities of practice relates to this project as many team sports, such as hockey, are composed of individuals who share experiences and facilitate growth through communal discussions, practice, mutual understanding and meetings.

Within economic geography, the theory of knowledge management has been used to describe the processes of automobile production. Takahashi and Vandenbrink (2003) describe

the production of the Honda Civic, which they bring to market in about half the time it takes Toyota. There have not been many studies that specifically address knowledge management in the world of sports (aside from one that I will address shortly) and this project hopes to correct that. Most of the work that has been done involves the internalization and transfer of best practices from one organization to another (sometimes through GPNs) usually in business or tech industries. O'Dell and Grayson (1998) discuss how different tech industries such as Texas Instruments (TI) use things like "internal benchmarking" processes in order to transfer and share knowledge from one facility to another and the advantages and limitations of this network. These limitations include the amount of time it takes to adapt to a new process from one location to another and the adaptability of this new process. The advantages of this process allow corporate organizations to see where they can improve knowledge management and production (O'Dell & Grayson, 1998).

In the world of sports, Pinch & Henry (2010) takes elements of knowledge management and relate them to the British motor sporting industry (BMSI). While this sport itself is very different from hockey, some of the methodology such as the sharing of skills, knowledge and know-how between individuals involved in the sport remains the same. Pinch and Henry (2010) highlight some key elements of knowledge sharing that can help facilitate the future development of not just the British motor-car industry but the sharing of knowledge in sports as a whole. In the British motor sports industry (BMSI) knowledge shared among athletes, mechanics, technicians, and the racing team are crucial to the success of that team. Turnover of technical staff is common in this field (which can see a technician working for 8 or more teams in his whole career). This turnover of technical staff brings new knowledge to teams. Knowledge is also traded between racing teams in other ways including: post-race discussions

with other teams revealing or ‘leaking’ team secrets; discussions with their suppliers (who often supply more than one team); informal collaboration between teams; knowledge shared between contact networks of people in the industry; and finally observations made by teams on the track (Pinch & Henry, 2010). However, this article focuses more on the trading of technical and car design knowledge of the BMSI and not so much on the knowledge traded that enhances drivers’ skills. Currently there is a lack of academic literature focussing on knowledge transfer methods involving coaching and learning new skills when it comes to sports. This research project hopes to fix this gap by providing a framework for how research can be conducted in the future using knowledge management.

All of these elements combined create what Pinch and Henry (2010) call ‘community of knowledge’. The term ‘community of knowledge’ is defined as a close-knit community (this being the BMSI community) in which information is disseminated through untraded means, meaning information is often shared without seeking payment but sometimes will include a long-term obligation. For hockey players the sharing of knowledge will focus on conversations between players and teams that help to develop a stronger team, informal collaboration between teams, knowledge shared between contact networks of people in the hockey industry, and observations made by teams on the ice rink. The frequent movement of players and coaches between teams also aids this exchange of knowledge.

When discussing the trade of knowledge in sports there are three specific types of knowledge that will be looked at: codifiable knowledge which can be physically recorded as well as tacit or experimental knowledge which is shared through training and practicing. All of these elements will be useful in understanding how knowledge in the form of skills and talent is shared

between Chinese and Canadian hockey teams to facilitate the growth of hockey in China and the globalization of the sport as a whole.

The academic literature that is used for this research project situates the theoretical concepts of GPN's and Knowledge Management which form the backbone to this paper. This literature also provides the background on how these theories developed and how they are currently used. In the upcoming chapters of this research project, I will be using these theories as well as our understanding of the globalization of ice hockey to explain how Canada is playing a significant role in the development of the hockey in China ahead of the 2022 Winter Olympic Games in Beijing.

Chapter 3

Methodology

This research project uses a mixed methods methodology in order to ascertain the role Canada is playing in the globalization of hockey, the development of the sport in China, as well as the knowledge sharing processes at play in this GPPN ahead of the 2022 Winter Olympics. Mixed methods use both qualitative and quantitative research methods and apply them both as a solution to help answer research questions (Johnson et. al, 2007). Mixed method approaches to research are meant to consider multiple viewpoints, perspectives and standpoints using both quantitative and qualitative research in order to better understand a central research question (Johnson et. al, 2007).

The information obtained through this mixed method approach describes how Canada is aiding in the development of the sport in China and how mutual cooperation between nations can lead to the spread of sports in new geographic areas. The central research questions for this project include: *How are Canadians involved in the development of the sport in China ahead of the 2022 Winter Olympics?* As well as: *can the development of the Chinese hockey teams here in Canada and in China be conceptualized as a form of global player production networks (GPPN)?*

The mixed methods used for this research project include a review of academic and grey literature that relate to the overall research topic and provide theoretical background as well as interviews with mainly Canadian actors involved in this development. The use of these methods should provide the researcher with evidence to answer the overall research questions. However, the ongoing COVID-19 pandemic and the embargo on international travel has greatly affected

this project such that the research strategy had to be modified in order to adhere to pandemic restrictions in Canada and China.

Given restrictions on travel to Beijing to interview key informants in person, the best alternative was grey literature. Grey literature is defined as literature that is created beyond the traditional academic publishing and distribution channels (Simon Fraser University, 2021). This type of literature includes government documents, news and magazine articles, speeches, on-line reports and social media posts (Simon Fraser University, 2021). It has both pros and cons as a source of data and information. There is an abundance of non-academic hockey literature in the form of informed newspaper and magazine articles, news and media reports that present “insider” information that is not reported in more formal news channels. This grey sporting literature provides insights into Canada’s role in the development of the sport in China ahead of the 2022 Winter Olympic Games. The dangers of grey literature include: propaganda, biases, one-sided arguments, and lack of peer-reviews. The advantages of grey literature include; immediacy, access to inside information, the correction of lies and errors, and information that may have been overlooked by academics. Grey sources have to be used critically, with checks (where possible) on the reliability of the source. Research in the natural sciences tends to focus on peer-reviewed sources, but in the social sciences both grey and peer-reviewed academic literature can be of use in explaining social phenomena.

Grey literature was obtained with the help of a research assistant, Yun Tian, who is a doctoral student at the Chinese Academy of Social Sciences in Beijing. Yun scoured the Chinese media including web sites, publications, and newspapers for information relating to the overall development of hockey in China and how Canada is playing a role in this development. Grey literature related to this topic will be used to supplement the academic literature as there is an

abundance of relevant grey literature. The information obtained through this type of literature helps to paint a broader and more vivid picture of the overall development of the sport and the role Canada is playing. While academic literature is important to the overall theoretical background of this project, grey literature allows us to understand current discussions and provide additional factual information found outside the academy.

Aside from grey literature, the other major method used to obtain data includes the use of semi-structured interviews with Canadian actors involved in the development of hockey in China. The central focus of these interviews is to ask respondents questions regarding: Canada's role in the development of the sport in China; the transfer of knowledge between Canadian and Chinese actors; and the globalization of the sport and its expansion within this new geographical area. Numerous actors from across Canada who have been involved to some capacity with growing the sport in China were interviewed, seeking their insights and feedback from a semi-structured questionnaire.

A semi-structured questionnaire was used. This type of questionnaire allows for a free-flowing discussion between the interviewer and the interviewee that normally obtains the most information from each interviewee. The use of structured questionnaires can often limit an interviewee's response to a simple yes or no answer, or a position on a Likert scale, whereas a semi-structured questionnaire allows for a more natural and unhindered response with fewer constraints. Each questionnaire included about 20 questions and was provided to each interviewer prior to the interview so that they could look over the questions. These questions were used to facilitate a discussion about each of the topics and allowed the interviewee to respond open-endedly rather than having to answer a simple 'yes' or 'no' answer to the questions which would not have provided the extensive content needed for this project.

Each questionnaire was individually structured, with questions adapted to an interviewee's background and role within the hockey community. Some interviewees come from a player, coach or official background while other interviewees come from a more organizational and educator background. Even though these questionnaires were personalized in order to suit the broad range of individual actors, the overall themes of the questions all relate to the central research questions. The interviewing of both Canadian and Chinese actors involved in this development play an important role as they are the ones who hold the knowledge I am seeking for this project. This is why a discussion through a semi-structured interview using an open-ended questionnaire is used as opposed to a structured questionnaire.

In total, 11 actors from Canada, mainly in the province of Ontario were interviewed between December of 2019 to August of 2020. Canadians are heavily involved in the development of the sport in China and Canada is one of the locations that the Chinese are using to grow their hockey talent by sending teams and actors here. The questionnaire used for the semi-structured interviews was modified to adhere to Canadian customs and to address the specifics of the development of hockey here in Canada and the globalization of hockey from a Canadian perspective. Interviews took place in person up until March of 2020 due to the COVID-19 pandemic and the remaining interviews took place over the telephone between March and August of 2020.

Interviewees were recruited at first by contacting parties thought to have been involved in this network. Parties and actors belonging to organizations such as the Canadian Olympic Committee, Hockey Canada, The Ontario Hockey League, The Ontario Women's Hockey League, Canada-China Business Council, Maple Leaf Sports and Entertainment, International Ice Hockey Federation, Hockey Hall of Fame, Greater Toronto Hockey League, HC Kunlun Red

Stars (Beijing), Central Hockey Academy (Toronto), and the Toronto Girls Hockey Association were all contacted and asked to participate in this research project. Potential interviewees were contacted via phone calls, email and (prior to the Covid-19 pandemic) walk-ins to arrange meetings through secretaries or front desk clerks. Actors from within these organizations were contacted and asked to participate in this research project as they were believed to have knowledge related to this overall research project and could potentially aid in our understanding of the connection between Canada and China and the globalization of hockey. Overall, this method of recruiting interviewees proved to be moderately successful up until August of 2020 as no more interviewees could be recruited after that time which could be related to the political tensions between Canada and China and the Covid-19 pandemic.

As mentioned above, actors from several different hockey backgrounds and roles were interviewed in order to get a broad perspective on how Canadians are playing a role in the development of hockey in China. These actors include educators from the Hockey Hall of Fame, Canadian officials who have worked or trained officials in both China and Hong Kong, Canadian organizers working with the Kunlun Red Stars HC, Canadian officials with the IIHF who have worked in China, Canadian athletes playing in Hong Kong, organizers with the Canadian Olympic Committee & Ontario Hockey League, and a Coach with knowledge of the Chinese training in the Greater Toronto Area. This wide range of Canadian actors from many different levels of hockey development and who are directly or indirectly linked to the development of the sport in China were able to provide detailed evidence about how Canada is involved in the development of the sport ahead of the 2022 Winter Olympic Games.

Originally, this project was also supposed to obtain interview data using this same type of methodology, from actors on the other side of this development in Beijing. Beijing was selected

as the second site to conduct interviews as there has been a substantial growth in hockey, as well as other winter sports, in the region ahead of the 2022 Winter Olympic Games as well as being home to numerous sporting institutions in China that are helping to facilitate this development of the sport. Beijing is also the location where there is a lot of Canadian involvement in the development of this sport. This trip was supposed to take place in the summer of 2020 and would have attempted to interview actors associated with the development of the sport in Beijing as well as China as a whole. Some of the actors, firms and institutions that would have been sought out for interviews if travel to China had been possible include the Chinese Olympic Committee, The Chinese Ice Hockey Association, China Sports University, The City Administration of Beijing, The GAS, The Beijing 2022 Organizing Committee, Kunlun Red Star HC, the Beijing International Ice Hockey League (BIIHL), as well as hockey athletes, officials and coaches.

The questionnaire that was to be used for the semi structured interviews in Beijing had been translated from English to Mandarin Chinese so as to obtain the most participation in this research project. The questions on this copy of the questionnaires remained basically the same as the English copy, just translated into Mandarin Chinese. This questionnaire had also been tailored slightly, just as the Canadian one was, in order to adhere to Chinese customs as well as to ask questions specifically regarding Canada's role in the development of hockey within China. Due to most of the interviews in Beijing having supposed to have been conducted in Mandarin Chinese, a master's student working with Dr. Gao Boyang of the Central University of Finance and Economics in Beijing who is fluent in both Mandarin and English was supposed to assist in conducting of interviews since I am not fluent in Mandarin Chinese. It was intended that all interviews that would have taken place in Beijing were booked or set up in advance so as to

maximize the number of interviews the researcher could gather while in Beijing with extra time left free in case of an unexpected rescheduling of some interviews.

Unfortunately, due to the COVID-19 pandemic, this was not possible due to the travel restrictions put in place by both by the Canadian Government and the Government of the People's Republic of China. Therefore, interview data was only obtained from Canadian actors involved in this development. Due to these travel restrictions, it was almost impossible to obtain interview data from Chinese actors. A researcher in China was also hired in late 2020 in order to help obtain interview data on this development from within China due to the COVID-19 travel restrictions. However, possibly due to strained relations between China and Canada over the Huawei affair, all attempts to arrange interviews in Beijing were declined. But the research assistant based in Beijing was able to provide additional grey literature published in China that relates to this project. The problem of not being able to obtain interview data due to lack of participation in China also began to affect the research in Canada as well. Eventually toward the end of 2020, it became increasingly difficult to obtain interviews from actors in Canada.

The main reason I believe for this disconnect is due to strained relations between the two nations in recent years. Originally China and Canada worked cooperatively, especially when it came to the development of hockey within China over the last decade or so. However, the house-arrest in Vancouver of Huawei Executive Meng Wanzhou in 2018 by Canada in response to an extradition request from the United States has caused a major rift in this relationship which has grown in the last several months. Soon after the arrest of Meng Wanzhou, in response the Chinese arrested and detained Canadians Michael Spavor and Michael Kovrig in what some are calling a case of hostage diplomacy (BBC, 2020). In addition to these arrests by Canada and China, China's treatment of its Uyghur population in its western Xinjiang has also created

divisions among the two nations as some believe the treatment of these people by the Chinese government to be inhumane. On June 4th, 2021 Canadian opposition leader, Erin O’Toole, called on British Prime Minister Boris Johnson to push for the relocation of the 2022 Winter Olympic Games out of China (Taylor, 2021). Canada along with the United Kingdom and European Union have also placed sanctions on China over the treatment of these peoples and there are growing calls from actors within these nations to boycott the upcoming 2022 Winter Olympic Games in Beijing all together (Economist, 2021). These current geopolitical tensions between Canada and China which have grown since late 2018 have greatly affected the ability of the primary researcher to obtain interview data.

Interview data that were collected in person recorded using a Sony UX560 Digital Voice Recorder UX Series with the data being stored on my personal MacBook Pro. Interview data that was collected through a telephone interview took place using an iPhone 11 and was recorded and stored using the Voice Memos App on the same MacBook Pro. Each interview was then coded using a key that is stored on a password protected MacBook Pro in order to enhance the security of the data and to ensure the safety of the interviewees as well as to keep them anonymous. All interviewees were interviewed on their own terms and had the option to withdraw from this project at any time they wished as well as had the opportunity to stop the interview process any time, and not respond to specific questions.

Once the interviews were completed, coded, and stored, they were transcribed. Originally, the transcribing process would have taken place in two phases. Phase one after the collection of the Canadian interviews and phase two after the collection of Chinese interviews. However, since interviews were not obtained from China due to the COVID-19 pandemic, there was only a need to transcribe one set of interviews. After the interviews from phase 1 were

transcribed, the data were analyzed in order to find information relating to the overall research project. This analytical process included looking for key words, phrases, and terminology found within the data that relates to the central research questions of this research project. Finally, the analysis of data also included using the triangulation method which involves looking for common answers to questions that could be used to help understand common themes. Overall, these analytical techniques were used to gain an understanding from the interviewees of the role Canada is playing in the development of hockey in China on many fronts including the training of athletes and officials, league organization, and the construction of venues ahead of the 2022 Winter Olympic Games.

Aside from the review of relevant academic and grey literature and the collection of data from Canadian actors using semi-structured interviews, archival data from the IOC and the IIHF were extracted in order to help explain the historical development and the successes and shortcomings of hockey within these two nations. Archival data from the IOC was used in order to compare Canada's and China's successes in hockey at the Olympic games in both male and female competitions. Understanding this allows us to understand why China may seek the talent and expertise of hockey-skilled Canadians when it comes to Olympic Ice Hockey. Data from the IIHF annual reports from 2010-2020 were also used in order to compare hockey in Canada and China. These data show how many registered athletes (male, female and youth) member nations have, and how many hockey venues are located within each country. By looking at these records from 2010-2020 we are able to see how athlete and venue construction has grown within China over the last decade. This data also shows how Canada has more registered athletes and venues than any other IIHF registered nations. Overall, these records from both the IOC and IIHF show how different these two nations are when it comes to successful Olympic hockey competitions

that produce medals, hockey participation numbers and number of hockey venues. These data also show how Canada and China have ranked globally over the last decade as well how the sport has grown within China since 2010.

Additionally, the rosters of major hockey teams playing in China and Hong Kong, including the rosters of the Kunlun Red Star HC, Shenzhen Kunlun Vanke Rays HC, Macau Aces, Hong Kong Tycoons, Kowloon Warriors, and the South China Sharks were examined. Players nationalities were identified from these rosters in order to document the ethnic makeup of these teams and to see what nations are making up a majority of professional players in China. This reveals which nations and players are influencing and aiding in the development of the sport in China.

Furthermore, players who were seen to represent more than one nationality (often Canadian and Chinese) were also examined as these types of players have a key role in the GPPN connecting these two nations. Athletes who were identified to have both Canadian and Chinese citizenship were cross referenced with elitesportprospects.com in order to determine the players birth nation and current nation they represent. Overall, I was able to identify 10 players who were born in Canada but have relocated to China and obtained Chinese citizenship due to their Chinese ancestry. This was done in order to identify players who have been involved in the production of hockey talent in Canada but have moved to China and are playing in China while being trained in Canadian hockey, relating back to the overall GPPN this research project sets out to investigate.

Overall, these mixed methods assembled data that will be used to answer the central research questions of this project. The review of grey literature provides additional data to help understand the role Canada is playing in the development of the sport in China. Interview data

provides direct evidence that relates to how Canada is aiding in the development of the sport in China. And finally, the addition of archival data is also used to support this research. Each of these methods was used in order to help obtain data and help understand how Canada is involved in the development of hockey in China ahead of the 2022 Winter Olympic Games.

CHAPTER 4

GROWTH OF HOCKEY IN CHINA

This chapter will discuss the overall growth of western sports in China as well as addressing more specifically how the sport of hockey has grown within this country. In order to understand how hockey has globalized and how it has taken shape in China, it is important to understand how western sports came to the country and how they have developed since then. This chapter will also look at the growth of hockey in China over the last decade to in order to understand the development and growth of the sport in the lead up to the 2022 Winter Olympic Games. Overall, this chapter will provide an overall understanding of how western sports and hockey itself has developed and how the sport has grown in recent years.

Many western sports were first introduced to China in the late 19th century following the Opium Wars and the treaties of Whampoa (1844) and Tianjin (1858) signed with the French and the British Imperial Powers (Zhouxiang, 2013; Pletcher, 2020). Christianity and many affiliated organizations began to spread through China as the Qing government was obliged to allow this under these two treaties (Zhouxiang, 2013). With the spread of Christianity, organizations such as the YMCA brought with them many western sports and introduced them into local communities especially in major trading cities of Beijing, Shanghai, Tianjin, Guangzhou & Fuzhou which were all under treaty concessions with many foreign nations (Zhouxiang, 2013). China joined the Olympic movement in 1924, the same year as the inaugural Winter Olympic Games and its National Olympic Committee (NOC) was recognized as the Republic of China (ROC) by the IOC (Zhouxiang, 2013). During the 1930's and 40's western sports continued to grow in China, even as the nation was fighting a brutal war with Japan. However, the nation still failed to earn a single medal at the Olympics during these two decades (Zhouxiang, 2013).

In the early years following the communist takeover in 1949, The People's Republic of China (PRC) allowed the continued spread of western sports. However, in the following decades tensions would arise between the central government and western sports organizations. The first of these tensions, which affected the growth of western sports in mainland China, was the relocation of the ROC to Taiwan following the communist revolution in China (Chan, 1985). This led to two contingents representing China at the 1952 Summer Olympics in Helsinki, even though only the ROC was recognized by the IOC (Chan, 1985). Eventually the IOC recognized the NOC for the PRC following this incident. However, this recognition was short lived as the members of the PRC refused to participate in the Olympic Games in Melbourne 1956 after discovering the NOC from the ROC was still recognized by the IOC (Chan, 1985). This became known as the Two-China problem within the Olympic Movement (Tan & Houlihan, 2012). Tensions between the central government and western sports organizations further increased during the Cultural Revolution which took place from 1966 to 1976. The Cultural Revolution led to the complete collapse and dismantling of the sports system in China: many western sports were seen as an elite cultural threat to the communist regime and sporting venues in major cities began to be used for "struggle sessions" (Zhouxiang, 2013; Zhouxiang & Hong, 2019).

However, elite sports made a brief comeback to China in 1971 thanks to "Ping-Pong Diplomacy" which briefly helped to thaw the chilled relationship between China and the United States (Zhouxiang & Hong, 2019). The success of "Ping Pong Diplomacy", which helped to strengthen relations between China and the US through a friendly table tennis match, led to western sports slowly beginning to emerge again in China. By 1974, 15,806 sports meetings at both the regional and national level took place and in 1975 the PRC sent a letter to the IOC asking to re-join the organization (Chan, 1985). In October of 1979 the Nagoya Resolution was

passed and the PRC once again became a member of the IOC (Chan, 1985). However, this re-admission of the PRC (represented by Olympic code CHN) to the Olympic movement had meant that some stipulations were placed upon the ROC's NOC such as the ROC being referred to as 'Chinese Taipei' and represented by the IOC code TPE in Olympic Competitions (Chen, 1985).

The Peoples Republic of China officially returned to the Olympics at the 1980 Winter Olympic Games in Lake Placid and won their first medals at the 1984 Summer Olympics in Los Angeles (Chen, 1985). Following the readmission of China to the Olympic movement, the Chinese began to strengthen their ties with the IOC through the nomination of sporting officials with good language skills (Tan & Houlihan, 2012). During the 1990's and 2000's China was quickly moving up the medals chart placing 5th in Barcelona 1992, 4th in Atlanta 1996, 3rd in Sydney 2000, and 2nd in Athens 2004 (Zhouxiang, 2013). China also received their first medal at the Winter Olympics at the 1992 Winter Olympic Games in Albertville (IOC, 2021). In 2001, Beijing won the rights to host their first Summer Olympic Games in 2008 (Zhouxiang, 2013). This was a momentous occasion for China and its people as the games were seen as a symbol of national restoration, national identity, international recognition, economic prosperity and a landmark event in Chinese history (Zhouxiang, 2013; Zhouxiang & Hong, 2018). The Chinese were also able to top the medals table for the first time at these games, the first ever Olympics in China. These games in 2008 also symbolized the peak of the "open doors" policy enacted in the late 1970's in China by Deng Xiaoping. This policy established a socialist market economy and led to China becoming engaged in global capitalism to promote the nation's economic and social developments, and to raise China's status in the international arena (Tan & Houlihan, 2012). Both the 2008 Summer Olympics and the upcoming 2022 Winter Olympics in Beijing present

“an opportunity for the brilliant Chinese civilization to embrace the Olympic movement”

(Liangren, 2021).

With a few bumps in the road along the way, such as the two-China problem and the Cultural Revolution, we can see that western sports have slowly overcome resistance in China over the past 150 years. In recent decades, since re-joining the Olympic movement in 1979, western sports have seen some growth in the country. With this growth of western sports and the addition of sports popular in Asia to the Olympic Games, such as Judo, Table Tennis and Karate, China was able to start climbing up the medals tables since the 1990's and reaching the top of the table at the 2008 Summer Olympics. The central government continues to contribute to the development of many western sports by investing in sports infrastructure, and bidding for Olympic Games with 97% of the nation's sporting budget dedicated to the development of Olympic sports (Tan & Houlihan, 2012).

With the influx of western sports into China, it was only a matter of time before hockey branched out into China. China joined the IIHF in 1954 and the sport began to grow steadily up until the Cultural Revolution in 1966 (Li & Nauright, 2018). Following the Cultural Revolution, China returned to the Olympic movement in 1979, and participated in its debut Winter Olympic Games in 1980, with hockey once again gaining popularity in the country. In 1981 the Chinese Ice Hockey Association (CIHA) was created in Beijing and in 1986 and 1990 the men's national team would go on to win gold at the Asian Winter Games and helped lay the groundwork for a growing hockey market (Li & Nauright, 2018). The women's national team was also able to obtain two gold medals at both the 1996 Asian Winter Games hosted in Harbin, China and the 1999 Asian Winter Games hosted in Kangwon, South Korea. Even though they have not obtained a gold medal since the women's competition in 1999, the Chinese have become very

successful at hockey competitions at the Asian Winter Games and are currently ranked second in total medals with 11, placing them just behind Kazakhstan. During the mid to late 1990's however, even as the women's national team was winning gold medals, hockey in China began to hit a barrier as the government reduced investments in the sport and the number of hockey and other winter sports venues decreased dramatically (Li & Nauright, 2018).

By the 2010's winter sports were on the rise again in China. After being awarded the right to host the 2022 Winter Olympic Games in 2015, the Chinese central government began to invest considerable resources into the development of hockey and other winter sports in preparation for the Games. Youth hockey participation in Beijing also began to rise at this time (Li & Nauright, 2018; Li Et al., 2020; Organizer #3, 2020). The Chinese government also invested heavily in the construction of hockey venues in many cities, especially in the southern regions of China which do not have the same winter climate as the north (Xinyu, 2020). President Xi Jinping is hoping that this development will lead to over 300 million Chinese citizens participating in winter sports ahead of the 2022 Winter Olympic Games (Freimond & Mang, 2019). During an interview in 2021, vice minister of the sports department of Beijing Winter Olympic organizing committee Wang Yanxia stated that

“the Beijing Winter Olympic Games is a major landmark activity at an important historical node. It is a major international activity in the process of building a well-off society in an all-around way” (Liangren, 2021)

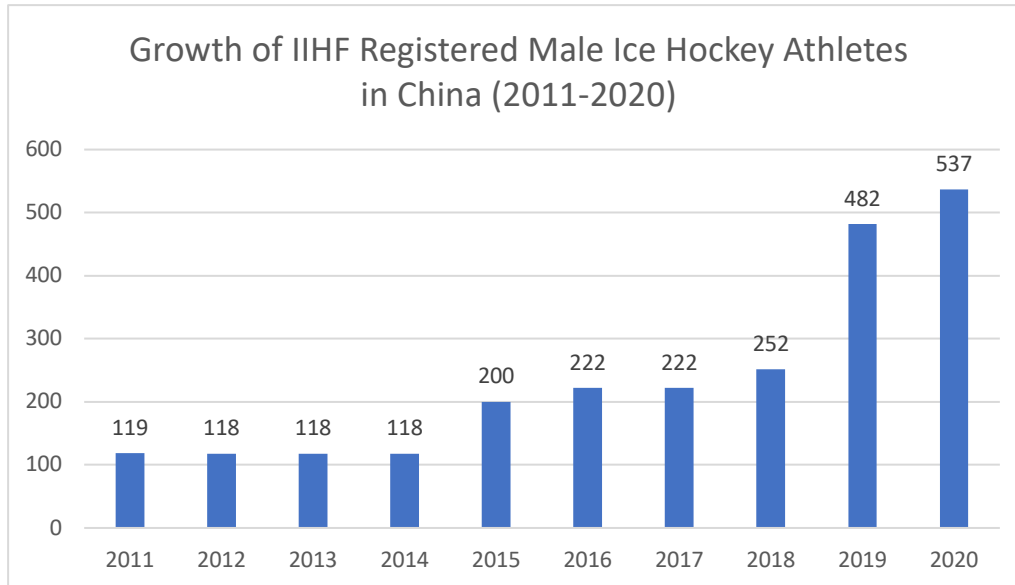


Figure 1: Source: IIHF Annual Reports (2011-2020)

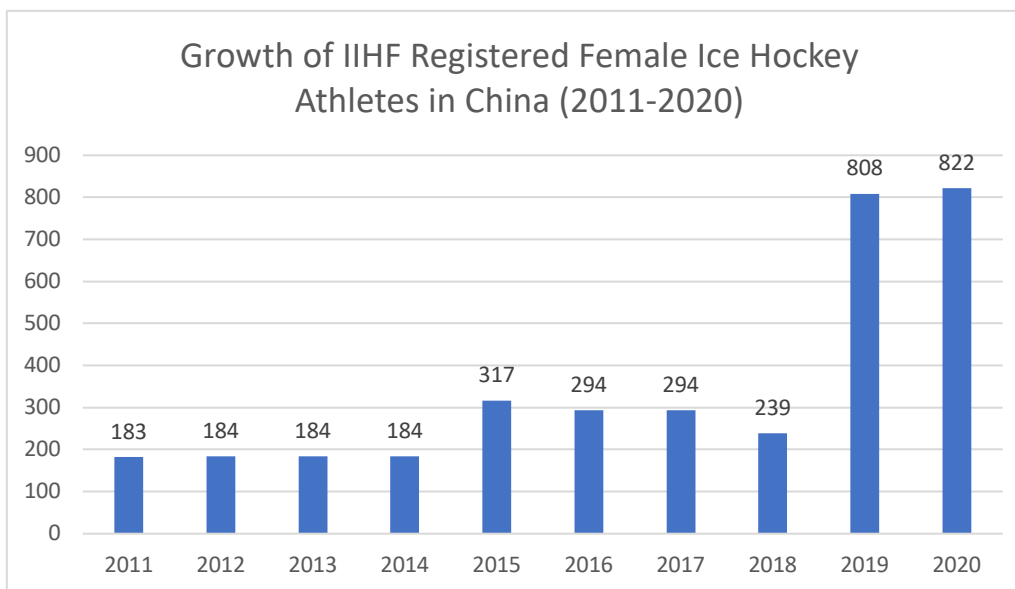


Figure 2: Source: IIHF Annual Reports (2011-2020)

Over the last 10 years the number of male IIHF registered hockey athletes has increased from 119 players in 2011 to 537 players in 2020. As Figure 1 shows, the strongest increase in male hockey players in China we can see took place between 2018 and 2019. In 2011 there were a total of 183 IIHF registered female hockey players in China, which quickly shot up to a total of 822 registered hockey players by 2020. In Figure 2, we can see the largest increase of female athletes took place between 2018 and 2019 with an additional 569 registered female players. As

of 2020, there are a total 285 more registered female than male hockey athletes in China. This large increase in the number of registered players from 2018 to 2019 was intended to create a critical mass from which to draw an Olympic team. There was also smaller but also significant growth in both the number of registered male and female athletes between 2014 and 2015, the year in which Beijing was awarded as the host of the 2022 Winter Olympic Games.

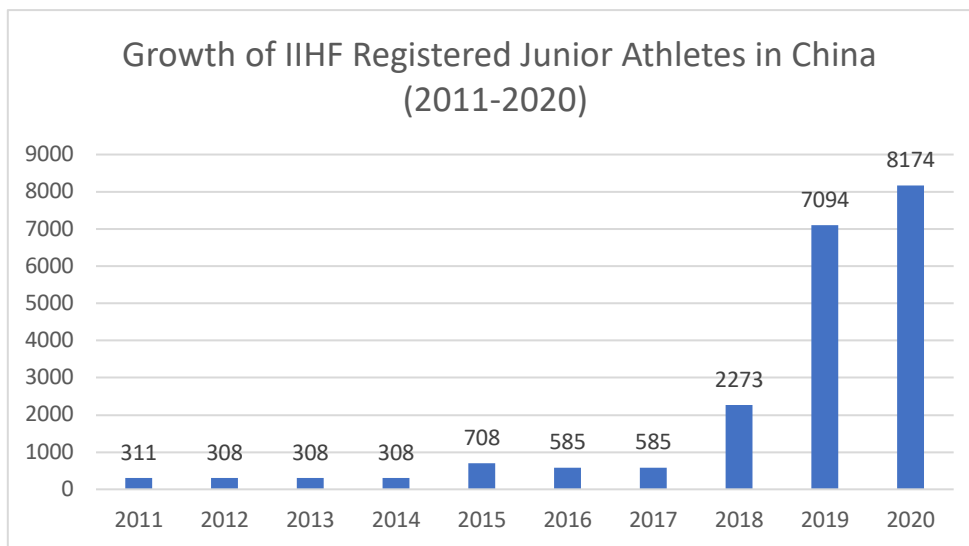


Figure 3: Source: IIHF Annual Reports (2011-2020)

During this same period, the number of registered junior hockey athletes in China had also begun to grow significantly. As Figure 3 shows, in 2011 there were a total of 311 registered junior hockey athletes in China. By 2020 there were over 8,174 registered junior athletes in the country. Compared to both the male and female athletes over the last 10 years the growth of junior registered hockey athletes in China has been much larger. The trends in the growth of junior athletes in China between 2011 and 2020 follows similar trends to those found for male and female hockey athletes. There was a slight increase in player groups from 2014-2015 ahead of China being awarded the 2022 Winter Olympic Games, with a slight decrease in registered athletes occurring between 2016-2017 within the female and junior groups. From 2018 to 2019

however, there was a large increase in registered junior hockey athletes in China with a total of 4,821 athletes added.

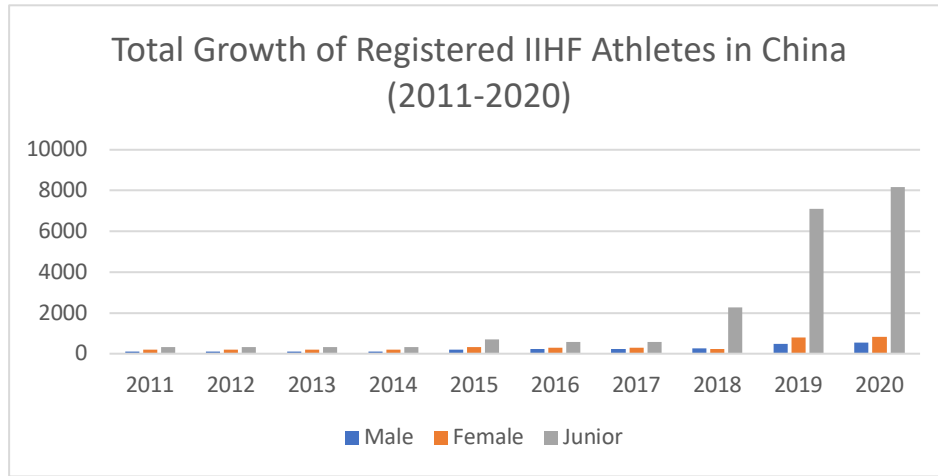


Figure 4: Source: IIHF Annual Reports (2011-2020)

Figure 4 shows the growth of all hockey athletes in China was slow at the beginning of the decade. After being awarded the right to host the 2022 Winter Olympic Games, growth of the number of hockey athletes in China began continued to slow up until 2018 when it began to increase dramatically. From 2018 to 2020 it can be seen that there was a sharp increase in athletes from 2,746 in 2018 to 9,533 in 2020, compared to the growth between 2015 and 2018 which was much less. Junior athletes in China represented the group with the largest growth during this time and as of 2020 there are a total of 8,194 IIHF registered junior athletes as followed by registered female athletes (822) and male athletes (537).

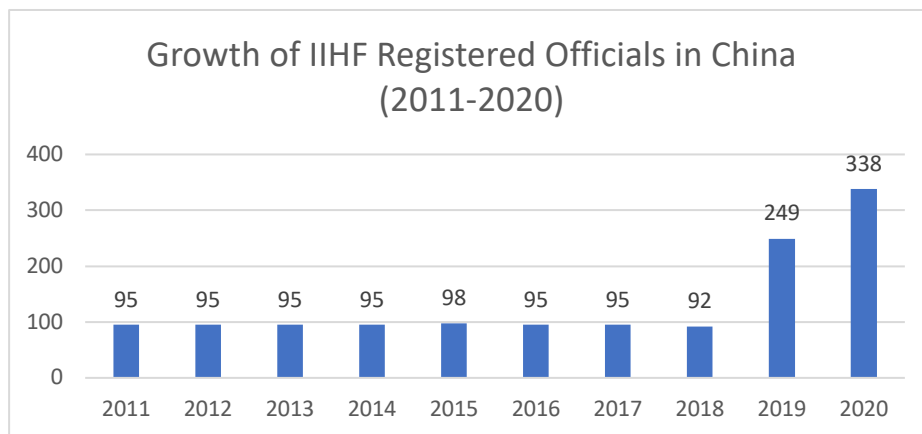


Figure 5: Source: IIHF Annual Reports (2011-2020)

The growth seen amongst hockey athletes in China over the last 10 years has been mirrored, to a lesser extent, among IIHF registered officials. Figure 5 shows that from 2011 to 2014 there were a total of 95 IIHF registered hockey officials representing China. In 2015 this increased slightly to 98 before dropping back down to 95 between 2016 and 2017 and decreasing further to 92 in 2018. In 2019 however, there was a large growth of IIHF registered officials in China as there were 249 registered officials that year. By 2020 the number of registered IIHF officials representing China had increased to 338. Like hockey athletes themselves, the number of hockey officials increased dramatically after 2018 in the lead up to the 2022 Winter Olympic Games. However, even though there has been an increase in Chinese registered officials in recent years, according to anonymous sources it is still unlikely that there will be enough Chinese officials to officiate the entire hockey competition at these Olympic Games (Official #1, 2020)

“I went to PyeongChang in 2018 and I went there working for the IIHF in an off-ice role. So when I was there I saw all of the officials again and there were no [Chinese] officials at the Olympics in 2018. And there were no Chinese officials on the radar to get to the 2022 Winter Olympics. So I know that there was hope but there is still so few Chinese officials that you know they didn’t really have enough to train. There isn’t enough time left to train them because you have to do an X number of events before you go to something like the Olympics” (Official #1, 2020)

With the growth of the sport in China comes the need for an increase in hockey venues for these athletes to play on. Until recently, lack of hockey infrastructure has hindered the development of the sport nationally (Official #2, 2020). Luckily, China has invested heavily in the construction of new hockey arenas over the last 10 years to aid with the growth of the sport. Currently the Chinese are building hockey infrastructure at record rates (Organizer #3, 2020).

Between 2010 and 2015, China tripled the number of indoor rinks and doubled its registered players (Zhouxiang, 2013). Currently the Chinese government is investing US\$15 billion in outdoor winter sports infrastructure and US \$8 billion on indoor facilities ahead of 2022 including 1,000 ice rinks (Freidmond & Mang, 2019). Even Canadian companies like CTC Ice & Snow are getting involved with the construction of hockey venues in China.

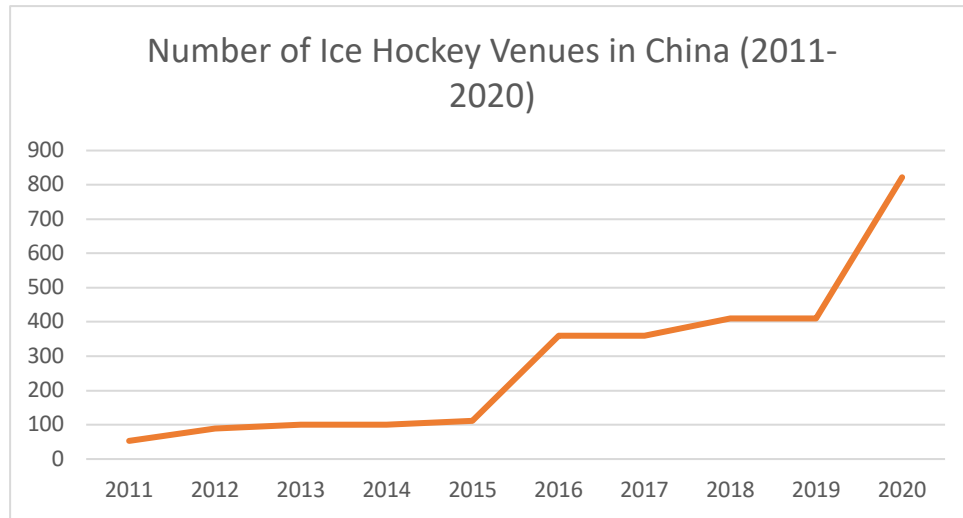


Figure 6: Source: IIHF Annual Reports (2011-2020)

The growth of venues in China over the last decade is represented in Figure 6 and shows in 2011 there were a total of 53 hockey venues in the nation according to the IIHF annual report. This included both indoor and outdoor hockey venues. By 2014 the number of hockey venues in China had almost doubled to 101 venues. In 2015, the same year China was awarded the 2022 Winter Olympic Games, there were a total of 112 hockey venues. By 2016, the number of hockey venues in China increased to 360 and by 2019 there were a total of 410 venues. The biggest increase in hockey venues in China occurred from 2019 to 2020 with a doubling of hockey facilities from 410 venues to 822 venues. The development of hockey venues across the country ahead of the 2022 Winter Olympic Games will play a crucial role in the development of the sport for generations to come.

As mentioned above, 97% of the national sports budget in China goes toward the development of Olympic sports, this greatly contributed to the building of hockey and other Olympic sports venues throughout the nation (Tan & Houlihan, 2012). According to a Canadian hockey organizer working in Beijing “*They are building rinks like it is going out of style... They are putting more resources into it than we would ever do*” (Organizer #3, 2020). This large increase in hockey venues in China in the past decade, and especially in the last couple of years, reflects the overall growth of hockey in China ahead of the 2022 Winter Olympic Games. According to an organizer in Canada, large investments by the Chinese central government in both men’s and women’s teams as well as related hockey infrastructure will help China become a good hockey nation ahead of and beyond the 2022 Winter Olympic Games (Organizer #2, 2020).

Media reports on the growth and development of hockey in China has been focused on three main areas from both sides of this development. Western media outlets at first were reporting on the emergence of a new hockey market in China (NHL, 2018)(Neville, 2019) while others more recently have focused on the potential boycott of the upcoming Winter Olympic Games in China (Ritchie, 2021) (Wade, 2021). The Chinese media however has been more focused on reporting the development of winter sports and the preparation for the 2022 Winter Olympic Games (Yu, 2021) as well as the growth of hockey in the nation ahead of these Games (Jing, 2021) (Xiu, 2021) (Sijia 2021), with no discussion or mention of a potential Olympic boycott.

The legacy associated with the Olympic Games is often contested. Some cities, including Barcelona, Atlanta, Beijing and London have benefited from hosting the Olympic Games through urban regeneration and tourism but others, including Montreal, Sydney, Athens and Rio

de Janeiro all faced infrastructural and economic struggles following the Games (Banjo, 2011; Weber-Newth et. al, 2017; Gold & Gold, 2007). In Canada, the Winter Olympic Games have been a success for the development of sports, something China hopes to replicate. Many children who grew up watching and being inspired by the 1988 Winter Olympic Games in Calgary eventually would go on to train in legacy venues from those games and eventually compete in the 2010 Winter Olympics in Vancouver (Organizer #1, 2020).

“I think we can look at a direct correlation between the success of the 1988 Games in Calgary and the success of the Vancouver Games in 2010 and then draw a correlation of the 2010 Vancouver games and our success in PyeongChang in 2018 and that correlation is the kids that grew up watching the Olympic Games in 1988, saw those games were inspired by those games and went on to train in the legacy facilities that were built for these games in 1988 and became athletes in the 2010 games” (Organizer #1, 2020)

According to Organizer 1, this shows how both the excitement of the games and properly run legacy venues can create substantial economic benefits, aid in the development of sports, as well as increase participation. However, research supporting this claim on domestic sporting development benefitting from hosting the Olympic Games are still underdeveloped.

Regardless, the Chinese are hoping to replicate the presumed success seen in Calgary 1988 and Vancouver 2010 by investing billions of dollars in sports infrastructure ahead of the 2022 Winter Olympic Games in Beijing. Since the adoption of the Olympic Agenda 2020 by the IOC in 2014, and after the failure of legacy venues in Athens and Sydney, a tremendous amount of pressure is being put on the creation of a successful legacy (Organizer #1, 2020). Olympic Agenda 2020 promoted by IOC president Thomas Bach declares that “no games can be hosted if

there are no long-term legacy projects that are left in the [host] countries” (Organizer #1, 2020).

The Winter Olympic Games in China are expected to facilitate the growth and popularity of hockey in the nation as well support the idea of legacy infrastructure by using already existing venues left over from the 2008 Summer Olympics (Liangren, 2021).

While hockey is growing in Beijing and in the Pearl River Delta thanks to KHL/ZhHL expansion and leagues like the BIIHL and the CIHL, there are many other areas of China which have a climate suited to the growth of the sport. China is home to a diverse climate system thanks to expansive geography. The south of the nation is home to a subtropical climate while the much of the Tibetan Plateau in the west is a tundra. But the northern provinces of Heilongjiang, Liaoning and Jilin experience subarctic climates during the winter, making them ideal conditions for hockey. Cities like Harbin, and Changchun have already hosted prominent winter sporting events such as the Asian Winter Games and the Winter Universiade and many of the universities in these 3 northern provinces are already home to women’s hockey programs (Official #4, 2020). The Chinese are also focusing on rink construction in cities like Shanghai, and Qingdao, in addition to building more venues in and around Harbin (Organizer #3, 2020)

From obtaining their first medals at the 1992 Winter Olympic Games in Albertville to hosting the Winter Games 30 years later, the growth of the winter sports industry in China is making an impact on the growth of western sports in China (IOC, 2021). China hopes that by hosting the Winter Olympic Games in 2022 the winter sports industry will grow even more. In Beijing specifically, Vice-Mayor and Vice President of the Beijing 2022 Organizing Committee, Zhang Jiandong, hopes to see the sports industry becoming a key point for new growth within the Chinese economy with growth from new businesses (Lu, 2000). Winter sports is projected to be a \$160 billion US industry by 2025 (Freimond & Mang, 2019). Many regions of China are

capable of hosting winter sporting competitions and some cities in Inner Mongolia have seen a steady growth of hockey and have even been hosting ice hockey competitions for the last couple of years (Aiping, 2020). However, the sport still has a long way to come in comparison to Canada. According to an interview with an organizer working in Beijing, hockey is nowhere near as popular as other western sports like basketball (Organizer #3, 2020). In addition, this organizer goes on to say they only about 1% of the entire Chinese population is aware or even interested in hockey (Organizer #3, 2020)

“About 1% of the population is aware of the sport and interested in it, which makes up about 1,000,000 people which is still a lot of people but its still 1%.”

(Organizer #3, 2020) [math is incorrect as 1% of China’s population is 14,393,230]

(United Nations, 2019)

In June of 2021, Yanqing (one of the Olympic clusters for the 2022 Winter Olympic Games) hosted the National Hockey Championships in preparation for the upcoming Winter Olympic Games. These Championship games were selected to take place in Yanqing in order to help prepare the city and region and to help promote the sport ahead of the Olympic Games (Xin, 2021). Teams from all over China (including the debut of Macao) were represented at these championship games and reflect the growing diversity of player backgrounds (Sijia, 2021) (Jing, 2021). The team from Beijing Sports Vocational College eventually won the championship and the team from Chongqing (which was only formed 4 years ago) placed second (Jing, 2021).

The Chinese men’s national hockey team was ranked 37th in 2017, and the women’s team was in decline (Xinyu, 2020; Doyle, 2017). However, these teams made a quick rebound and by 2020 both Chinese Men’s and Women’s National Team received

the bronze medals in group B of the U20 IIHF World Championships in South Korea and groups A & B at the Women's U18 IIHF World Championships (Beijing International Hockey Association, 2020). As host nation for the 2022 Winter Olympic Games, China will automatically qualify for all sports competitions including hockey. According to a Coach:

“China is using the 2022 Olympics to create a decent men's and women's team. Anything the Chinese put their mind at they excel at, whether it be gymnastics, or skiing they are a very proud nation and proud of being on top. They will give their athletes whatever they need to be number one.” (Coach #1, 2020).

For these games, the men's national team is currently placed in group A with some pretty strong competition including Canada, The United States, and Germany. Ahead of these games, the men's Chinese national hockey team has been training in Shenyang and includes 10 players from Beijing, reflecting the cities “important role” for cultivating hockey talent (Jing, 2021). The women's national team however is in Group B along with Japan and 3 teams still yet to qualify. The final qualifications for the women's competition for the 2022 Winter Olympic Games will take place in November 2021.

Hockey at the 2022 Winter Olympics in Beijing will mainly take place at the Wukesong Arena in Central Beijing.

Overall, we can see that since the mid 19th century, Western sports have begun to expand and take hold in China with a few hiccups along the way, most notably the Cultural Revolution. The introduction of western sports and the PRC re-joining the Olympic Movement in the late 1970's has allowed these sports to continue to grow and flourish which is reflected in China's gradual climb up the Summer Olympic medals table since the 1990's. While the growth of

western winter sports took longer to take off in China, we can see that the nation is investing heavily in these types of sports ahead of the 2022 Winter Olympic Games in Beijing.

Development and athletic participation in relation to hockey over the last 10 years has increased dramatically with billions of dollars (US) invested into hockey programs and infrastructure development and hundreds of new athletes in China being registered with the IIHF between 2011-2020.

Chapter 5

PLAYER NETWORKS: WHY CANADA?

The growth of structured amateur sports in the 19th century played a major role in the world of sports we know of today. Many of these sports were played locally but eventually the Olympic Games (founded by Pierre de Coubertin in 1894), and the Winter Olympic Games in 1924, led to sport globalization with the introduction of many sports to new parts of the world. After the Second World War, sports continued to grow in popularity with many national and international sporting federations founded. Eventually, sports became a big business and ever more globalized as many sports, including basketball, hockey, baseball and football, were professionalized. The Olympic Games originally restricted to amateur athletes, also began to change in the post war years and by the 1970's became ever more professionalized due to Soviet "shamateur" athletes and the commercialization of the games (Soares, 2007). Today sports are a huge business with athletes and brands having recognizable star status on an ever-increasing global scale. Since the development of the open-door policy in China many sports have begun to flood into the country allowing China to become a top medal earner at the Olympic Games. Now with the 2022 Winter Olympics on the horizon in Beijing, China is beginning to branch out into winter sports including hockey.

For some time now, Canada has been aiding in the production of hockey athletes in China as well as the overall development of the sport. Global Player Production Networks (GPPN) describe the production and trading of players and athletes on a global scale and the networks they form. GPPN is rooted in the theory of Global Production Networks (GPN). At the core of GPN theory is the mutual cooperation and competition between nations in order to enhance value creation and transformation of industries, often led by a lead firm producing goods and services

(Coe & Yeung, 2015; Yeung and Coe, 2014). This research project investigates how cooperation between Canada and China is aiding in value creation, transformation, and expansion of hockey in China.

The growth of sports and the pursuit of profit has led to the spatial restructuring of sports and the geographical expansion of athlete production (Decosse & Norcliffe, 2020). At the global scale, the work of GPPN focuses on the training and trading of athletes, and how this has evolved in many sports. Work conducted by Decosse & Norcliffe (2020) has provided insight on the GPPN of hockey athletes at high performance training centres (HPTC) in British Columbia and acts as a precursor to this research project. Their work focuses on the shift of hockey player production from local and regional institutions to HPTC in hopes of better marketability and value creation. In this project, I examine the training of athletes in China and Canada as well as the transfer of athletes between these two nations as China seeks to tap into the Canadian athlete market in this new GPPN connecting the two nations.

The game we know as hockey with today's rules and regulations started in Canada in the 19th century: it has played an important role in the development of Canadian culture and is strongly intertwined with the national narrative of Canada (Hardy & Holman, 2018). Due to this strong cultural connection, Canada has played a dominant role in the globalization of hockey for many years both in male and female competitions. However, it is difficult to take the Canadian hockey game and export it in its entirety to other parts of the world because of cultural differences.

If we look at both Canada's and China's IIHF ranking over the last fourteen years it is evident just how dominant Canada is when it comes to hockey competitions, and how China ranks in comparison.

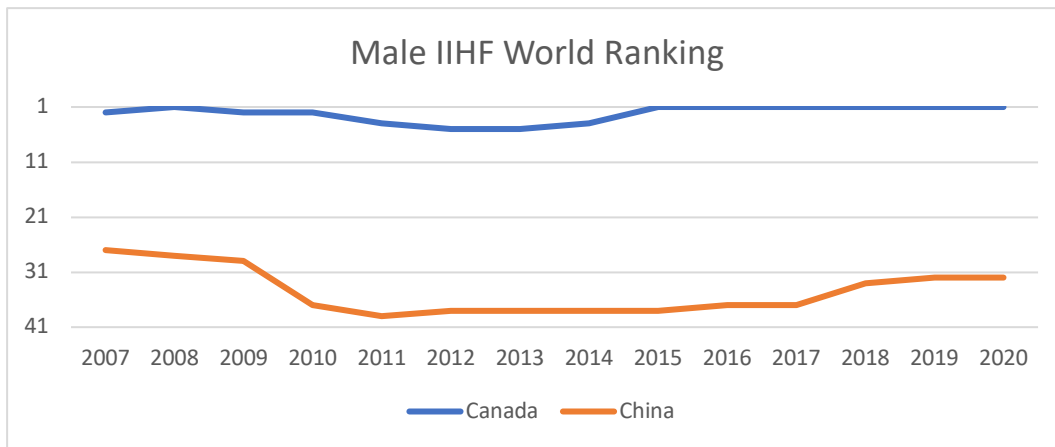


Figure 7: Source IIHF Annual Report

Figure 7 shows the Male IIHF rankings of Canada and China from 2007 to 2020. Since 2007 we can see that Canada has never fallen below the fifth position during this fourteen-year period, and since 2015 has held the number one position. China on the other hand fell from the 27th position in 2007 to the 39th position globally by 2011. China hovered around the 39th to 37th position from 2011 to 2017 but recently has risen from the 37th position to the 32nd position by 2020.

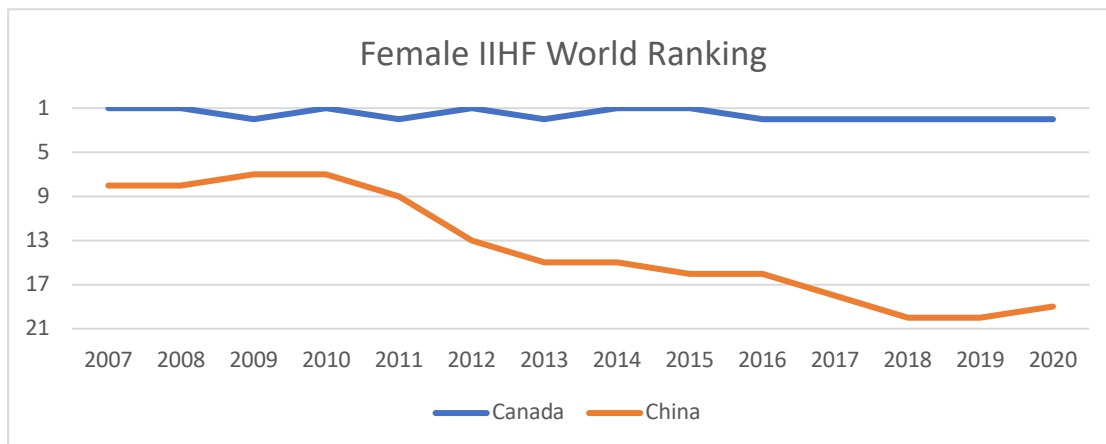


Figure 8: Source IIHF Annual Report

In comparison to the male IIHF rankings of Canada and China, the female IIHF rankings tell a different story. As Figure 8 shows, over the fourteen-year period from 2007 to 2020, the Canadian female team has been able to maintain a first or second position spot on the global IIHF ranking. Canada has ranked number one eight times over the last fourteen years and since

2017 has held the second position, showing its strength in the sport. China on the other hand has plummeted in female IIHF rankings over the last fourteen years. From a high position of seventh between 2009 and 2010, China's ranking has decreased over the last 10 years to a current position of nineteenth in 2020, which is up one position from their lowest ranking of twentieth in this fourteen-year time span.

At the Olympic Games, Canada has won a total of 16 medals including 9 gold in male hockey competitions since the sport debuted at the 1920 Summer Olympics in Antwerp (the sport was moved to the winter competition at the inaugural Winter Olympic Games in Chamonix in 1924) (Hardy & Holman, 2018; Arnold, 1983). China on the other hand has never qualified for the male competition at the Winter Olympic Games. The female competition in hockey at the Olympic Games debuted in Nagano 1998 and saw Canada obtain the silver medal and China placing fourth at these games. This was China's highest ever position in Olympic hockey competitions and since then has only qualified twice for the female Olympic ice hockey competition finishing in seventh place at the 2002 Winter Olympic Games in Salt Lake City and seventh place again at the 2010 Winter Olympic Games in Vancouver.

Since 2002, Canada has won 8 gold medals at the Winter Olympic Games in hockey competitions both male and female. Canada swept the competitions at both the 2010 Winter Olympic Games held on home turf in Vancouver and the 2014 Winter Olympic Games in Sochi showing their current and continued dominant power in the sport. Canada currently has the most medals in both male and female Olympic competitions with a total of 22 medals. Canada and China have qualified for both the male and female competitions at the 2022 Winter Olympic Games in Beijing. China has automatically qualified for both of these competitions as host nation, regardless of their current IIHF Ranking. These statistics show that in comparison to

China, Canada is a dominant hockey power with years of winning experience at the Winter Olympic Games. It is this experience that the Chinese respect and want to emulate. According to an interview with an IIHF Official,

“Canadian culture is leading in the world of hockey. I mean the Chinese have never been fools, they’re high achievers, and they probably wanted the best and that’s what they felt they were getting” (Official #3, 2020)

How and why is Canada aiding in the overall development of the sport and the production of athletes in China? Through the interview process, I was able to identify numerous Canadian organizations that are involved in the development of hockey in China as well as Hong Kong. In, China the lead organization for the development of hockey and its athletes is the central government, more specifically, the General Administration for Sport (GAS).

Since being awarded the right to host the 2022 Winter Olympic Games the GAS has invested billions of dollars (US) into developing its program (Friemond & Meng, 2018; Tan & Houlihan, 2012). Working under the GAS are 16 National Sports Management Centres (NSMC) in China who control training and govern domestic sport competitions and work with the non-governmental national sport associations (NSA) to promote sports in the nation. (Tan & Houlihan, 2012). In a 2021 interview with vice minister of the sports department of Beijing Winter Olympic organizing committee Wang Yanxia stated that “the preparation process of the Winter Olympic Games itself reflects the strong leadership of the Communist Party of China and the institutional advantages of ‘Concentrating on major events’” (Liangren, 2021). Currently 97% of the Chinese governments sporting budget is dedicated to the development of Olympic sports (Tan & Houlihan, 2012).

Canada has been involved to some extent in the development and the promotion of hockey in China for a few decades now. Starting in the 1970's the University of Toronto hockey team would visit Harbin to get people involved by playing exhibition games with teams and also practicing skills with them (Official #4, 2020).

“The idea was for them [the Canadians] to play some exhibition games with the Chinese team and also to practice with them so it was like a training session for the Chinese players” (Official #4, 2020)

It was also at this time that Canadian officials started to train individuals in China on a very minor scale (Official #4, 2020). These exhibition games between the University of Toronto and Chinese hockey players and referees in Harbin were short lived and only lasted until about 1974 but were the start of a long-lasting relationship between these nations (Official #4, 2020). These matches occurred in the middle of the Cultural Revolution in China during which western sports were restricted. However, we can see from these exhibition games that China did allow for some exceptions when it came to sports diplomacy by allowing nations like Canada and the United States to play sports in China in the early 1970's. Exhibition games play a large role in the globalization of sport, specifically in nations where the sport may not be popular. According to an organizer with the Olympics, international exhibition games between nations are “essential” and “fundamental” to both the growth of the sport internationally and within the Olympic community (Organizer #1, 2019). After these exhibition matches involving the Chinese in the 1970's there was a long gap in Canadian influence on Chinese hockey and it was not until the late 1990's that Canadians started to participate in Chinese hockey again.

In the mid 1990's it was common for members of the Canadian and Russian embassies in Beijing to play friendly hockey competitions with one another (Official #2, 2020). By 1998 the

amateur Beijing International Ice Hockey League (BIIHL) was founded and is currently made up of about 140 expatriates (mostly Canadian) and Chinese nationals (BIIHL, 2021). The BIIHL currently has 9 teams competing against one another in the Beijing Capital Region and helps to promote the sport there. One of the main sponsors of the BIIHL is the Canadian founded Bauer Hockey (recently relocated headquarters to New Hampshire) which helps the league with equipment (BIIHL, 2021). This again shows the role Canadians and Canadian founded corporations are playing in the development of the sport in China and in this case the Beijing Capital Region specifically. It only took a few years but in 2003, China joined the professional Asian League Ice Hockey based in Japan in order to help strengthen its hockey development. The Asian League Ice Hockey is a league consisting of teams from the nations of South Korea, Japan, Russia and China. China had a total of 4 teams playing in this league based out of the cities of Beijing, Shanghai, Harbin and Qiqihar. China remained a part of this league until 2016 when it started to develop teams for more prominent international leagues such as the Kontinental Hockey League (KHL), Canadian Women's Hockey League (CWHL), and eventually the Zhenskaya Hockey League (ZhHL).

By the early 2000's Canadian companies such as CTC Ice & Snow were also investing in the growth of Chinese hockey. CTC ice & snow has been active in the construction of ice rinks for hockey in China for the past 18 years (Freimond & Meng, 2018). According to a member of the IIHF, in the mid 2000's China began to send teams to Ontario to train and gain more international experience in hockey competitions (Official #3, 2020).

“if I'm China I can send teams into Ontario to participate and play in Ontario because elsewhere I can't, there is no-where else to send them, so like your end result is

your kind of forced into the globalization because there is no other option for you,”
(Official #3, 2020)

The Ontario Women’s Hockey league also at this time began to reach out to China and encourage its women’s teams to come to Canada to train (Official #3, 2020).

“the Ontario Women’s league has encouraged them to train and to come here [to Ontario] and train and such” (Official #3, 2020)

This was a formative step in the current trend of Canadians aiding in the development of the sport in China. Ahead of the 2010 Winter Olympic Games in Vancouver, the Chinese female national team spent a few weeks training in both Toronto and Vancouver competing against Canadians and being aided by officials (Official #4, 2020).

“Before the Vancouver Olympics the Chinese women’s team came to Toronto and they trained for 6 weeks in Toronto, they trained out in the east end of Toronto because of the high Chinese population in the area... So, they trained for 6 weeks and that cost them some money to stay over here, they went home and then they went to Finland for 2-3 weeks to train and then they came back to Canada a week before the Olympics and they trained before they went to Vancouver.” (Official #4, 2020)

However, the Chinese female national team was only able to place seventh at the Winter Olympic Games in Vancouver. This trend of Chinese players and teams coming to Canada to train and play against Canadian teams would continue for the next decade with teams regularly coming to the Greater Toronto Area and Vancouver to train at facilities such as the University of British Columbia (IIHF, 2018).

Over the last 3 years, before the COVID-19 pandemic, the Chinese were sending large groups of players to Canada to train and even participate in private lessons, some even staying

for an entire year to train as well as study (Organizer #3, 2020). The Greater Toronto Hockey League (GTHL) also played a minor role training Chinese officials at this time as well (Official #1, 2020). There are even some organizations in the Greater Toronto Area (GTA) like the Canadian-Chinese Ice Hockey Association (CCIHA) located in Markham, Ontario which promotes and develops the sport in Toronto's Chinese communities.

By 2011 there were numerous Canadian organizations working in China to help develop hockey. Organizations like Can Life Sports began to organize hockey events and competitions throughout China (Friemond & Meng, 2018). The Chinese Ice Hockey League (CIHL) based out of Hong Kong was also founded at this time and is modelled after the British Columbia Hockey League (BCHL; CIHL, 2021). The CIHL has strong ties to Canada, so much so that the Logo for the CIHL features a Maple Leaf and a Chinese Star, which are national symbols for Canada and China (CIHL, 2021). This league is made up of four teams including the Hong Kong Tycoons, Shenzhen Sharks, Kowloon Warriors, and the Macau Aces all playing in south-eastern China. The goal of this league is to help promote hockey in and around Hong Kong (CIHL, 2021).

Since 2017, the CIHL has been working closely with the GTHL to aid in the development of the sport in and around Hong Kong. The league also recruits 3-4 North American officials a year in order to help officiate the games between the league's teams (Official #2, 2020). This group of Canadian officials went on to start the Greater Bay Hockey league and Championship in and around Hong Kong in order to promote and develop the sport in the area (Official #2, 2020).

“my group started a cross border hockey league called the Greater Bay Hockey League and this was youth hockey so there were 3 age groups. So, they would bring a

team from Hong Kong and they would compete against 3 teams from Shenzhen in a tournament style” (Official #2, 2020)

Based on the current rosters for teams in the CIHL, as of February 2021, there are a total of 26 native Hong Kongers, 18 Canadians and zero Chinese nationals participating in the league (CIHL, 2021). Due to Hong Kong having its own national team it has separate representation from the PRC in both IIHF and the IOC (IOC Code: HKG), athletes who classify themselves as citizens of Hong Kong are represented in the data separately from athletes representing China. The CIHL is also sponsored by some high-profile Canadian corporations such as Air Canada, Manu Life, the Royal Bank of Canada and Scotiabank (CIHL, 2021; Official #2, 2020). The investment these companies make into the CIHL helps with rental times, as well as supplying equipment and funds to run this league. Hong Kong currently has some of the most expensive rental times in the world with costs upward of \$1000 an hour according to an official working in the area (Official #2, 2020).



Illustration 1: CIHL Logo (Source: CIHL.com)

The hope is that cooperation in the production of hockey talent will lead to the enhancement of value in the Chinese hockey team ahead of the 2022 Winter Olympic Games. Value enhancement is a key element of GPN methodology based on the sharing of knowledge, skills and processes between firms that in turn lead to growth (Coe & Yeung, 2015; Henderson et al., 2002; Coe, 2009). Knowledge shared between Canadian actors and their Chinese counterparts will enhance the value of Chinese hockey teams and players. In turn, the enhanced

value of hockey in China could then lead to enhanced value capture in the form of its players and brands.

Success in value creation relies on the stability and growth of hockey in China. In this GPN, rent takes the form of both human resource rents which are connected to an athlete's talent and marketability and brand rents through prominent hockey leagues, teams and 'brand name prominence' in China (Coe & Yeung, 2015; Henderson et al., 2002). The value captured from these rents in turn contribute to the overall development of the sport in China as higher rents represent higher growth of the industry. 'Relational rents' also contribute to the growth of an industry via mutual cooperation between firms, much like that seen between the CIHL and its Canadian sponsors as they work together to further develop the industry in China (Henderson et al. 2002).

Value that is created and shared by actors through the labour process also plays an important role in the development of this GPN. Actors on both sides of this development obtain knowledge and skills through the labour process, which in turn can lead to higher rents through value enhancement. Canadian actors who are driving the development of the sport in China through the labour process hope to enhance the value of the sport through the sharing of their expert knowledge and skills. The transfer of hockey knowledge and the opportunity for Canadian actors to go to China to aid in the development of the sport there allows for an exchange of cultures between actors as well. The Chinese are enhancing the value of their hockey due to the skills and knowledge learned through the labour process from Canadian actors, while the Canadians, in turn, are learning about Chinese culture. To a lesser extent the Canadians are also observing and learning specifically about ice hockey culture in China and the Chinese are learning about Canadian culture due to the mutual cooperation between actors in this network.

Since 2015, when Beijing was selected as the host city for the 2022 Winter Olympic Games over Almaty, the country has invested heavily in the development of the sport (Friemond & Meng, 2018). Within Beijing, the city has adopted a “market orientated” approach which has allowed the city to open up and collaborate with countries who are good at hockey (Jing, 2021). It is hoped that by collaborating with successful hockey countries (like Canada) through training and competition will aid in player development in China (Jing, 2021).

It was also around this time (the mid 2010’s) that China began to join more prominent hockey leagues such as the KHL and the CWHL. The HC Kunlun Red Star, a hockey club that plays in the KHL and is based out of Beijing, was founded ahead of the 2016-2017 season. According to a HC Kunlun Red Star organizer, joining the KHL, obtaining aid from Canadian athletes and coaches, sending athletes to Toronto to train the U20 and U18 national team, and partnering with the HC Kunlun Red Stars to develop a national program, are all key elements in building an Olympic hockey team in China ahead of the Olympic Games (Organizer #2, 2020). Since its founding, the team has played a key role in promoting the sport in Beijing by selling tickets and hosting local events (Organizer #3, 2020). Canadians have been involved with this organization since its inception in 2016 and the HC Kunlun Red Star are also sponsored by CCM, a Canadian hockey equipment manufacturer (Organizer #3, 2020; Kunlun Red Star, 2021).

During the 2020-2021 season there were a total of 12 Russians, 3 Canadians and 6 Canadian/Chinese dual nationals and zero Chinese nationals playing for HC Kunlun Red Star (KHL, 2021). In order to determine which players were dual citizens, I cross-referenced player profiles between the team’s website and elitesportsprospects.com. The players who claim to have both Canadian and Chinese citizenship I therefore determined to be dual nationals. All of these

dual nationals were born in Canada and obtained Chinese citizenship once they arrived in China. This shows how both Russian and Canadian players dominate this team roster and that possibly the ethnic Chinese do not yet have the high level of professional skills needed to play in the top tier global leagues like the KHL.

In 2017, the Canadian Women's Hockey League (CWHL) had also expanded into Chinese markets with the founding of the HC Kunlun Red Stars Women's team and the Vanke Rays both based out of Shenzhen (Dreyer, 2019). This expansion was short lived as the CWHL folded in 2018 (CWHL, 2018). These two teams based out of Shenzhen then merged together to form the HC KRS Vanke Rays and are currently competing in the Zhenskaya Hockey League (ZhHL) or the Russian women's league. Since moving to the ZhHL the team has been very successful and even won the league championships in 2019-2020 season (Murphy, 2020). Currently as of February 2021, there are 4 Chinese nationals, 4 Russians, 4 Canadians and 4 Canadian/Chinese dual nationals on the team's roster (ZhHL, 2021). Again, I also cross-referenced player profiles for the HC KRS Vanke Rays between the team's website and elitesportsprospects.com. I therefore determined that the players who claim both Canadian and Chinese citizens were dual nationals, as was the case for the HC Kunlun Red Star (KHL). Overall, foreign players make up a majority of all players playing for major teams in the CHIL, KHL and ZhHL.

As shown in Figure 9, There are also many Canadian born players of Chinese ancestry currently playing in the top professional leagues in China as well as the amateur leagues like the CIHL. In addition, I can account for 10 dual national Canadian-Chinese players participating between the HC Kunlun Red Star (KHL) and the HC KRS Vanke Rays (ZhHL) in China. All of these players were identified as being born in Canada and recently moved or obtained Chinese

citizenship. This could have been done not only to help boost the success of these two teams but also to provide China with experienced players that could be used on their national team during the upcoming 2022 Winter Olympics in Beijing in which the Chinese hope to medal. Currently, the production of hockey talent in Canada as opposed to China also contributes to a quicker ‘time to market’ (Coe & Yeung, 2015) as they already have the expertise and infrastructure available. According to the Canadian Olympic Committee, it is the National Olympic Committee (NOC) (in this case the Olympic Committee for the Peoples Republic of China) that determines who qualifies for a team (Organizer #1, 2019). In addition, sports federations determine the rules and guidelines for international competition to make it fair across the board (Organizer #1, 2019). It is evident that the Chinese organizers have tapped into a new market for hockey talent in Canada in order to add greater value to its teams.



Figure 9: Source: Individual Team Rosters for CIHL, KHL, & ZhHL teams in China

Both the United States and Canada are playing a strong leadership role in the development of women’s hockey globally due to their strength in the sport (Organizer #2, 2020). However, the sport is having a difficult time globalizing the women’s games as currently there are only six or seven powerful women’s national teams in the IIHF (Organizer #2, 2020).

Women's hockey in China on the other hand is improving due the aid of Canadian coaches who are visiting and helping with hockey training and development programs (Organizer #2, 2020).

According to an interview with an official from the CIHL, they believed Chinese coaches are still lacking some skills and knowledge when it comes to player development, especially when compared to the HPTCs in North America (Official #2, 2020).

“The Chinese coaches just don't have the experience, they haven't been exposed to as much hockey as say a guy who has played in Canada. The understanding of the game just isn't at the same level so it's very important that you know these high-performance centres and high-performance training sessions are led by someone who really understands hockey and then in turn can share the knowledge with the locals”
(Official #2, 2020)

The current culture in China is that people who have the excess funds would not mind paying top dollar for their children to train at high quality facilities with expert coaches and training staff. In this case, it makes sense for parents to send their children to HPTCs in North America with the hope of obtaining significant results when it comes to skills and knowledge (Official #2, 2020). Therefore, in the future we could see more Chinese youth training at these HPTCs in Canada as China continues to develop its hockey program post 2022.

Both societal and territorial embeddedness play a role in this GPN of actors involved in the development of hockey in China. Societal embeddedness is when actors are influenced by the culture established at locations where they originate and bring these influences with them to new areas where they operate (Coe, 2009; Coe et al. 2008; Coe & Yeung, 2015). In this case, Chinese actors are influenced by their culture and historical customs associated with their home. The Chinese government also exerts influence on its citizens when it comes to the development of

sport with the encouragement of nationalism and social collectivism as opposed to commercialism and individualism (Tan & Houlihan, 2012). Canadians are also influenced by their culture and historical customs in which hockey plays a significant role, unlike in China where the sport is still growing and does not have as strong roots. The strong hockey culture in Canada is both a strength and a weakness in this GPPN. When Canadian actors and firms bring their knowledge of hockey development to China, they bring with them their cultural and historical understanding of the sport as well. The Canadian passion and way of teaching hockey may not be perceived or be understood the same way in China as they do not have the same cultural connections to the sport.

According to an IIHF official, “Hockey doesn’t mean the same to [the Chinese] as it does to Canadians” (Official #4, 2020).

“Almost every town and city in Canada has a hockey rink, they have hockey programs. You have to realize that when you go to now even Russia, Finland, Sweden, Germany these countries, sure hockey is a big sport but it’s not a sport at the level it is in Canada and has nothing to do with Canada’s success whether its good or bad at world championships, it’s just that as Canadians we look at hockey as almost like our life blood” (Official #4, 2020)

When it comes to the globalization of this sport, this interviewee felt that it is important to allow the sport to develop in a somewhat natural way in new nations as it will be influenced by cultural factors different from Canada (Official #4, 2020).

“I think we have to be so very careful that we don’t try and preach the sport in these other countries [like China] the way that we preach it as a Canadian in Canada,

that to me is very critical, you have to understand where hockey fits as a sport in some of these other countries” (Official #4, 2020).

By allowing the sport to flourish within a new culture, it can provide a deeper connection as opposed to something so culturally different it almost seems hard to grasp. So, while Canadian influences are important for many aspects of hockey development in China, they feel the Chinese still need to be able to make their own cultural connections to the sport.

Territorial embeddedness occurs when actors and firms become embedded in the social dynamics and economic activities of the places in which they operate (Coe, 2009; Yeung & Coe, 2015). Over time these actors and firms can create new networks which help facilitate growth in their often new geographic regions (Henderson et al., 2002). In China, Canadian actors and firms are focusing much of their attention in two regions specifically, the Beijing Capital Region and the Pearl River Delta. In these two regions Canadians are aiding the development of leagues and hockey infrastructure in addition to player and official development. It is also possible that Canada may also be aiding in the development of the sport in north east China as well.

When in Canada, the Chinese focus most of their resources on sending teams to Vancouver and Toronto (both areas with high Chinese populations) for exhibitions and training, making these cities the location where the Chinese are embedding themselves in the GPPN. The Chinese are also tapping into the player markets in Alberta, British Columbia and Ontario as these were the locations where the dual national Canadian/Chinese citizens were found to have originated. Overall, it is evident that both societal and territorial embeddedness are playing a role in this GPPN and the development of hockey in China as a whole ahead of the 2022 Winter Olympic Games.

So why does China rely so much on Canada, as opposed to other powerful hockey nations such as Russia, the United States, Finland, Sweden or Czechia, to aid in the development of hockey, especially in preparation for the 2022 Winter Olympic Games? Canada is playing a huge role in the development of many aspects of hockey in China including the development of players and officials, league organization and development, sponsorships, and venue construction. There are also strong cultural and economic connections between China and Canada. Canada often has a reputation of being a very friendly and helpful country along with being one of the best and most competitive at hockey (Official #3, 2020).

“Canada is always very open people pretty flexible and willing to help others”

(Official #3, 2020)

However, China wishes to control this production and Canadian influences on its hockey development as much as possible. China often reaches out to other nations when it comes to the development of sports on their terms and would rather “bring in” global influences as opposed to global influences being “pushed in” to China (Tan & Houlihan, 2012; 147). This allows the central government in China to have more control on the global influences of hockey within China.

This relationship between these two nations has become strained since 2018 due to the ongoing detention of Huawei executive Meng Wanzhou in Canada and the arrest and detention of Michael Spavor and Michael Kovrig a few days later by China (BBC, 2020). In addition, China’s treatment of its Uyghur population in Xinjiang province has led Canada, the United Kingdom and the European Union to place sanctions on China and there is currently discussion of a possible Olympic boycott for the upcoming 2022 Winter Olympic Games in Beijing (Economist, 2021). While rumours of a Chinese Olympics boycott due to human rights

violations is nothing new (the 2008 Summer Olympics in Beijing were also threatened with a boycott), it still casts a shadow on the success of the 2022 edition of the Winter Olympic Games.

Canada has a significant ethnic Chinese population and Chinese-Canadians played an important role in the history of this nation dating all the way back to the 1880's and the construction of the transcontinental railway. Today, the Chinese population in Canada is the largest non-European ethnic group and accounts for about 4.6% of Canada's total population and 20.5% of Canada's visible minority population as of the 2016 Census (Lindsay, 2006; Statistics Canada, 2017). In 2001, Close to 45% of the foreign born Chinese-Canadian population was from in the Peoples Republic of China (Lindsay, 2006). As of the 2016 Canadian census, China represented the second largest immigrant population in Canada with just over 668,000 immigrants (Statistics Canada, 2017). Most of the Chinese population in Canada (82%) resides in the provinces of Ontario (47%) and British Columbia (34%) with the cities of Toronto and Vancouver containing the largest Chinese communities in the nation (Lindsay, 2006).

Language also played a key role in why Canada is a great place for the Chinese to send their teams to train. Mandarin and Cantonese are the two languages most spoken by Canada's immigrant population, representing about 10.4% of the total (Statistics Canada, 2017). With the highest concentration of Chinese immigrants moving to the cities of Toronto and Vancouver, it makes sense that the Chinese would send teams there to train and develop skills. For example, when the Chinese team came to train in Toronto ahead of the 2010 Winter Olympic Games, they trained in the east side of the city which is home to a large ethnic Chinese community (Official #4, 2020). The younger people in China are also becoming more fluent in English (Official #2, 2020). According to an interview with a GTHL/CIHL official, Canada was selected as the best place to train junior athletes as many Chinese youths know and can speak some form of English

(Official #2, 2020). The GAS also heavily promotes the use of English as it is core to “elite athletes’ academic curriculum” (Tan & Houlihan, 2012; 136). Therefore, it is easier for them to train in Canada as opposed to Russia or Finland. In addition to the cultural ties between China and Canada, there are also many economic ties. Organizations such as the Canada-China Business Council are also working to help promote business relations and economic development between these two nations.

Many Chinese communities within Canada also participate in sport and there are even Chinese specific hockey organizations like the CIIHA which is in the Toronto suburb of Markham and home to a large Chinese population. Some Chinese communities in Canada and the United States also participate in more homogenous sporting groups and play in tournaments such as the North American Chinese Invitational Volleyball Tournament. This tournament, which started in the 1930’s, requires ‘2/3 of all team members on the court to be 100% Chinese’ in ethnicity in order to help create a sense of ‘belonging’ through community building (Nakamura, 2019: 32). By participating in sports with other ethnic Chinese teammates, a player can find a sense of ‘belonging’ within this homogenous community by discovering new identities when playing with members of the same ethnic community (Nakamura, 2019). These strong Chinese sporting communities found in Canada and the United States have allowed these members of a minority ethnic groups to bond and create new knowledge together through these sports while still retaining important aspects as well as create new understandings of their cultural heritage.

Overall, it is evident that in comparison to China, Canada is a dominant power when it comes to both men’s and women’s hockey globally. We can also see that Canada has played a major role in the development of the sport in China over the last 20 years. Not only is China

sending athletes and teams to major Canadian cities like Toronto and Vancouver to train and develop skills, but the Canadians are also highly active within China as well. Since 1998, Canadians have invested in Chinese hockey development through the development of leagues such as the BIIHL and the CIHL, as well as launching a now defunct CWHL franchise. Major Canadian corporations and banks have also aided in the construction of venues and helped sponsored leagues and events in China. These sponsors also help cover time and equipment costs. Canadian officials and coaches have also gone to China to help grow organizations such as the HC Kunlun Red Star of the KHL and teams in the CIHL. Canada has also become a source of hockey talent in China as there are currently 10 dual Canadian-Chinese citizens who were born in Canada playing for teams in China as well as 58 Canadian athletes. Clearly, Canada is playing a significant role in athlete development in China, thereby contributing to the overall development of the sport ahead of the 2022 Winter Olympic Games in Beijing.

CHAPTER 6

KNOWLEDGE SHARING BETWEEN CANADIAN AND CHINESE ACTORS

This chapter will address the sharing of knowledge between actors involved in the GPPN connecting hockey in Canada and China, as well as the successes and shortcomings of knowledge transfer processes itself. The transfer of knowledge from Canadian actors to Chinese actors is important to understanding how Canada is involved in aiding the development of the sport and its players in China. Do cultural differences and language barriers hinder this transfer and influence whether or not the transferred knowledge has been interpreted usefully and used to facilitate the growth of the sport and its players in China?

As noted in chapter 2, the transfer of knowledge between individuals in the sporting world has been researched by Pinch & Henry (2010) in their work on the British motor sporting industry (BMSI). What that article lacks is an understanding how knowledge is transferred between individuals from different ethnic backgrounds and cultures who may not share a similar language. This intersection of knowledge production and culture will become key in understanding the knowledge transfer process between Canada and China.

The current study of knowledge management and production dates back to the works of Nonaka (1994). Knowledge management theory explores how individuals are able to make knowledge available to others by amplifying the knowledge they already have and creating new knowledge when it is transferred to new individuals (Nonaka & Krogh, 2009). This research project looks at how knowledge from Canadian actors is being transferred to their Chinese

counterparts and the successes and shortcomings of this transfer of knowledge. Both tacit and explicit knowledge play a role in this development.

Tacit knowledge is knowledge about a certain type of skill, job, or experience and is often personal and hard to codify as mentioned in chapter 2. Derived from the Latin word *tacet* meaning silent, it implies unspoken knowledge transferred by observing, learning and doing. The Canadian actors have an abundance of this type of knowledge when it comes to both player and infrastructure development due to the cultural significance hockey has in Canada. Tacit knowledge that is transferred from Canadian actors to their Chinese counterparts through the process of socialization includes sharing knowledge about the sport through observation, practice and imitation and often occurs on the ice and may play a key role in player development ahead of the 2022 Winter Olympic Games. Explicit knowledge transfer occurs off the ice through personal and group communication, books and documents, and videos and aids in the development of the sport.

Knowledge about different types of skills, methods, training techniques, tactics, workouts, equipment, statistics and rules of the game are all crucial in furthering the development of any sport. As we already know, Canada is playing a significant role in the development of hockey in China including the development of players. This is done mostly through an exchange of actors between these two nations, and with this comes the knowledge these actors possess. When Canadian actors travel to China to help develop hockey programs, they share their knowledge with their Chinese counterparts. The same happens when the Chinese come to Canada, they learn from and absorb the knowledge, skills, and techniques from Canadians.

Within Canada the production, exchange and sharing of both tacit and explicit knowledge takes place most of the time on the ice, through exhibition games, and training camps (Official #4, 2020). Chinese players have been coming to Canada, mainly to the Toronto and Vancouver metropolitan areas, for these types of developmental experiences for over 20 years. These exchanges have increased in recent years (prior to the COVID-19 pandemic) due to Beijing hosting the 2022 Winter Olympic Games. As mentioned in the previous chapter, the Chinese came to Canada ahead of the 2010 Winter Olympic Games to train and play in exhibition games. Not only do exhibition games aid in the globalization of the sport but they also provide an opportunity to understand different cultures, make connections, and help them experience what hockey is like in other countries (Organizer #2, 2020). This is similar to what occurred during the “Summit Series” between the Soviet Union and Canada in the 1970’s (Hardy & Holman, 2018). Exhibition games also enhance the transfer of tacit knowledge through the process of socialization. The process of socialization that occurs during exhibition games facilitates the sharing of skills, ideas and concepts.

A hockey educator reported that Chinese players used not to be very keen to join conversations or be very social after events (Educator #2, 2019). This may have been due to a language gap between Chinese and Canadian players. Language gaps hinder the transfer of explicit knowledge through conversations and social gatherings are limited in this GPN as there is often a lack of social communication by the Chinese off the ice. While tacit knowledge may be transferred on the ice, the exchange of explicit knowledge through the process of combination off the ice is almost absent. This also hinders the ability of the sport to grow in new regions as making connections and understanding cultural differences play an important role in developing hockey. However, hockey educator #2 (2019) has said that the Chinese “*are learning to socialize*

slowly” and therefore are getting better at being more social after events (Educator #2, 2019).

This is a major problem when it comes to the sharing and transfer of explicit knowledge as there are many tips, tricks and techniques that can be shared off the ice.

Another problem with the transfer of knowledge between Chinese and Canadian actors is that it may be hard to share knowledge about an activity that has a higher level of cultural significance in Canada compared to a nation like China that does not attach the same cultural significance to the sport. In return, it may be hard for the Chinese to understand the personalized knowledge or receive this knowledge about hockey skills from Canadian actors due to Canadians teaching something they value as more than just skills. The development of knowledge through direct interaction, known as conceptualization, can also become difficult as language poses a major barrier in communication between the Chinese and Canadian players. Direct communication through speaking off the ice normally plays a key role in the knowledge transfer processes of both combination and conceptualization. Knowledge learned and absorbed through these two processes could allow for the further growth and development of the sport in China. However, the absence of these two processes limits the amount of knowledge that is transferred from Canadian actors to Chinese actors due to a reluctance to participate in off-ice activities.

In addition to the lack of knowledge transfer through combination and conceptualization there also seems to be a lack of knowledge transfer through the process of externalization. Externalization of knowledge is a process in which tacit knowledge is converted into explicit knowledge between individuals through ongoing dialogue over time (Hildreth & Kimble, 2002). There is a severe lack of this type of knowledge transfer when it comes to the production of athletes as there is often a lack of continuous dialogue after exhibition games and training events in Canada aside from organizing further trips. On the other hand, there is a bit more

externalization occurring between actors involved in other aspects of the development of the sport in China like in the infrastructure and business sectors. When it comes to athletes however, Canadian actors may be reluctant to engage with Chinese actors who seem unable to participate in discussions once off the ice due to a language barrier. The creation of a continuous dialogue between actors and communication at the face-to-face level is crucial to both the externalization and conceptualization processes.

Shared experience is another process crucial to the transfer of knowledge between actors in this GPPN. Individuals with shared experiences, in this case experiences with hockey and its development, often create knowledge together by building a common perspective. In turn, this common perspective can be shared with other members of the GPN and facilitate growth. Without understanding the cultural differences and similarities between these two countries however, it becomes difficult for shared knowledge to be fully absorbed and understood.

“to send someone over who doesn’t understand the hockey mentality in China as compared to the hockey mentality in Canada... you can’t just go over there and preach Canadian hockey cause they just don’t get it” (Official #4, 2020).

According to this official, preaching the type of hockey specific to Canadians due to their enhanced cultural connectedness to the sport to someone who does not fully understand these connections has slowed the development of the sport in China. However, there need to be more research in order to support this claim.

Knowledge transfer through shared experience also relates to the theory of the relational economy presented by Bathelt and Glücker (2003) which stresses how relationships between actors can lead to further economic development through the sharing of knowledge. Emphasis is put on interpersonal relations rather than larger structural influences. The relationship between

Chinese actors and Canadian actors in this GPPN is important to help facilitate the growth of ice hockey in China using Canadian expertise. Within the relational economy, actors are often constrained by history and culture but are also path dependent.

“You need to be able to teach ‘hockey’ to suit their cultures... if you try to train their athletes and officials exactly the way that we do things in Canada it’s not going to be accepted” (Official #4, 2020)

The path of the actors on both sides of this GPN is to further the development of hockey in China. While actors may have different historical influences, the path to further the development of hockey in China remains the same. Actors are often more willing to share knowledge with each other after a more inter-personal relationship has been established. This often happens through recurring meetings and gatherings among the actors. The information exchanged during this process can lead to more knowledge being transferred from Canadian actors to Chinese actors which could further the growth of hockey in the country ahead of 2022. While the relationships between these groups were stronger a few years ago, since then they have been strained by current geopolitical issues.

Within China, Canadians are also playing a major role in the development of the sport ahead of the 2022 Winter Olympic Games on numerous fronts including working for professional teams and leagues, venue construction, coaching of officials and corporate sponsorships. However, the sharing of hockey knowledge between players from these two countries is still limited in China as there is still a lack of communal discussions off the ice. In China, education plays a major role in the development of any sport (Official #3, 2020). The transfer of knowledge from text or from explicit knowledge into personalized tacit knowledge is known as the process of internalization and plays a major role in hockey education in China.

According to an organizer in Beijing, the Chinese believe in individual skill sets and there is a strong focus on individualized sports (Organizer #3, 2020). This focus has led to strengths in that the Chinese are able to transfer explicit knowledge into tacit knowledge through the internalization process, but this creates difficulty in being able to develop strong team sports (Official #2, 2020). the Chinese developmental model for hockey does not really reflect the team nature of the sport (Organizer #3, 2020). This organizer further expressed their views on the development of the sport in China by stating:

“The Chinese believe in individual skill and skill development and to be a team athlete you have to understand the team dynamic., The Chinese development model doesn’t really reflect anything that has to do with teams, so the concept is hard to grasp. They believe in individual training and one on one training all the time. You can tell them every which way that they need other players so they can meet and play off each other and you don’t even need to be the most skilled player you can play a sport and be effective and later react and use your teammates, they just don’t get that.” (Organizer #3, 2020)

In 2021, prior to the Winter Olympic Games, 113 Schools in Henan Province were designated National Ice and Snow Characteristic Schools by the Beijing 2022 Organization Committee. These schools focus on the development of basic knowledge, policies, Olympic history, individualized skill sets, and theory of many winter sports including hockey (Toutiao, 2021). This focus on education and individual skill sets as opposed to teamwork that is often needed in team sports is a major cultural and institutional barrier to the development of the overall sport of hockey in China, which involves a lot of communication and teamwork between players.

Sharing information among community members or teammates is crucial to the success of any team sport. The concept of *communities of practice* describes this communal sharing of knowledge and provides members a space to foster knowledge and development through mutual interaction (Brown and Duguid, 2001; Hildreth and Kimble, 2002). Communities of practice facilitate growth and development and can help to solve problems across a GPN through participants working together. Collaboration between actors is crucial to this development as well as the reproduction of knowledge between individuals. Regarding GPPNs connecting Canada and China, we see communities of practice happening mostly on the ice through the socialization process that occurs during training, and exhibition games.

The process of externalization or the conversion of tacit knowledge to explicit knowledge is another important factor in the development of hockey in China as this process involves mutual interaction between actors through dialogue (Nonaka, 1994). Tacit knowledge that Canadian actors possess and share with their Chinese counterparts through this process is transferred to explicit knowledge and is crucial to the development of the sport in China as it helps to facilitate player development and the development of the sport as a whole. Continuous dialogue between actors who are involved in other aspect of this development such as through sponsorships, advising, and infrastructure development can help to facilitate the growth of the sport in China in addition to actors who are directly involved with the development of players.

Knowledge transfer that takes place in China may also face a language barrier. Many Canadians speak either English or French, and while English is becoming more and more popular in China, especially among younger generations, it is still a major barrier (Official #2, 2020). When it comes to ice hockey terminology, the English and French use similar words while this is not the case between Mandarin and English. Within China only about 1% of the

population is conversational in some form of English and is mostly common in China's large urban centres (Song, 2021). Since 2001, the GAS has prioritised English language skills in elite sports in order to not only improve skills among athletes but also to increase Chinese representation in international sporting federations (Tan & Houlihan, 2012). However, according to one interviewee, communication with individuals and teams in China is one of the biggest issues Canadians face when trying to help develop hockey (Official #4, 2020). Language hinders the transfer of explicit knowledge as well as the conceptualization process and has also created a barrier in the crystallization of new knowledge between Canadian and Chinese actors.

Crystallization, or the process in which new knowledge is better understood, is another crucial element to the success of knowledge transfer. In this GPPN crystallization of tacit knowledge through processes like socialization are successful as skills are easily transferred between players through practice, observation, and imitation. However, the transfer of explicit knowledge in this process is hindered as there is a lack of communication or knowledge transfer off the ice through combination.

Canadians are playing an active role in the expansion of the sport globally especially when it comes to coaching and training of officials and players (Official #3, 2020). In China, Canadians are specifically aiding in the development of hockey skills and leagues through sharing their tacit knowledge and know-how through socialization on the ice as they are highly experienced in coaching players, team development, fitness training, skill development, and officiating of the sport.

“Canada has such a vast knowledge to coaching and fitness training and nutrition and all the mental and all the emotional stuff and not just from a coaching and

a playing perspective but also from an officiating perspective we are the leaders in the world of hockey” (Official #3, 2020)

However, language and culture are both a problem when it comes to Canadians aiding in the development of hockey in China (Organizer #3, 2020). One of the ways China is tapping into Canadian hockey knowledge market is by trying to recruit individuals right out of college in order to help integrate Chinese athletes into the sport and become better at playing the Canadian system of hockey which is the most widely played version globally (Organizer #3, 2020).

Recruiting ethnic Chinese-Canadians reduces the problems associated with language. Chinese-Canadians play a major role in the transfer of knowledge between Canadians and the Chinese as many Chinese-Canadians speak both English and Mandarin and have some experiences with Chinese culture (Organizer #3, 2020). The Chinese have also invited star hockey players such as Wayne Gretzky to come to China and help promote the sport (Organizer #3, 2020).

Canadians are also playing a leading role in the development of hockey officials in China as well as in other parts of the world (Official #1, 2020; Official #2, 2020).

“Canada and the United States train a majority of the officials that you will find in the high performance world” (Official #1, 2020)

The development of officials for a sport is just as important as the development of its players and coaches as they play an integral role in the regulation of international protocol and the overall fairness and success of the game. Within China, many Canadians who go over to aid in the development of officiating do it by officiating leagues like the CIHL out of Hong Kong (Official #2, 2020). However, China will not have enough Chinese officials for the upcoming 2022 Winter Olympic Games as you need a certain number of years of officiating to become IIHF qualified at the Olympic level (Official #1, 2020). Knowledge shared between Canadian officials and their

Chinese counterparts through means other than socialization may be more common compared to the knowledge shared among players as there is less fluidity in the sense that officials are usually teaching each other based on rules and regulations from the IIHF which often involves continuous dialogue. Officials on both ends of this GPPN understand the material as they are both using the same text for reference. Unlike with player development, the knowledge that is transferred from Canadian officials to their Chinese counterparts through both socialization and externalization takes place both on and off the ice in the form of sharing skills and experiences.

Aside from the players playing on major leagues and teams in China, other Canadian talent that comes to China to aid in the development of hockey often stay for a short period of time. While some are invited multiple times, sometimes in excess of 10 visits to China to aid in this development, many come only for short periods of time (Organizer #3, 2020). This creates difficulty especially in the externalization process of knowledge transfer as there is a lack of continuity. In addition, it is hard to go over and train a team or group of individuals in China for a period of 2-3 weeks and teach Canadian hockey techniques to these players as many of them will not retain the skills they have learned (Official #4, 2020).

“If you go over there for 2-3 weeks, what is going to be developing after you leave, you know you have to find out what is China willing to do now I think Canada would send someone over that’s not a problem , but to send someone over who doesn’t understand the hockey mentality in China as compared to the hockey mentality in Canada I mean you can’t just go over there and preach Canadian hockey cause they just don’t get it.” (Official #4, 2020)

This official believed cultural differences make the type of hockey taught in Canada difficult to teach to Chinese players (Official #4, 2020). Ethnic Chinese-Canadian actors who may this

official believed may be better at transferring and sharing knowledge between Canadian and Chinese players also have a short turn around and are often only in China for a few weeks (Organizer #3, 2020). However more, evidence is needed to support this claim.

Overall, it is evident that the transfer of knowledge from Canadian actors to their Chinese counterparts mostly occurs on the ice with very little taking place off the ice. This had led to strengths in tacit knowledge being transferred through the process of socialization both in Canada and in China as this knowledge transfer process happens on the ice during friendly matches and training. Within China, the knowledge transfer process of internalization is also strong due to a focus on explicit knowledge in Chinese education about hockey. Significant cultural and language barriers on both ends of this GPPN hamper knowledge transfer through the processes of combination, and externalization, especially among players and coaches. Aside from player development however, knowledge transfer through combination and externalization is more common in other aspects of the development of hockey in China as social interaction and continuous dialogue play an important role in infrastructure development and hockey-related businesses linking Canadian and Chinese actors.

Chapter 7

Conclusion

Like many western sports, hockey has been around in China for several decades, but it was only recently that the sport began to grow in the lead up to the 2022 Winter Olympic Games in Beijing. Canada has been involved in various ways in the development of hockey in China ahead of the 2022 Winter Olympic Games.

Due to Canada's high IIHF ranking and impressive Olympic record as well as the strong cultural and economic ties between these two countries, China has sought Canadian expertise and hockey experience to aid in the development of the sport in China. The hockey relationship between these two countries was initially very strong. However, this relationship has weakened in recent years due to the ongoing COVID-19 pandemic and strained relations between these two countries.

Since the adoption of the "open doors" policy, China has become a power in the sporting world. This can be shown by the quick growth of China's Olympic record throughout the 1990's and 2000's with finally topping the medal table at the historically and culturally significant 2008 Summer Olympiad in Beijing. The "open-doors" policy enacted in the 1970's by Deng Xiaoping allowed for more engagement with the global economy and strengthened connections with the West. From the 1980's to the 2000's there was slow growth in hockey within China. However, the country was successful at hockey competitions at the Asian Winter Games.

Since the late 1990's several Canadian organizations have aided the development of new leagues in China such as the BIIHL and the CIHL. Since the 2000's, Canadian actors and firms such as the OWHL, GTHL, and Can Life Sports have also been aiding in the development of Chinese athletes and officials. In addition, Canadian firms are also aiding in the construction of

hockey related infrastructure within China. Many large Canadian corporations such as Scotiabank, Air Canada and Manulife also sponsor leagues in China and help to cover time cost and equipment. China also began sending its teams to Toronto and Vancouver to train, play exhibition games and learn from Canadian actors and firms. Within a couple years, Canadians were also travelling to China to aid in the development of the sport by training officials, playing exhibitions games, aiding in venue construction and running leagues. The main areas in China in which the Canadians are aiding in the development of the sport are the Beijing Capital Region and the Pearl River Delta, some of the most urbanized and densely populated regions of China. Other Chinese regions in the North have climates better suited to hockey but the role Canadians are playing in the growth of professional and amateur leagues as well as hockey related infrastructure seems to be limited in these areas.

When Beijing was awarded the right to host the 2022 Winter Olympic Games in 2015, the Chinese State, which acts as the lead firm and is driving the development of the sport in China, began to funnel large sums of money into the GAS for the development of hockey programs and facilities with 97% of their budget dedicated to the development of Olympic sports. Between 2015 and 2020, there was a tremendous growth in the number of IIHF registered athletes in China among, male, female and youth athletes. In addition, since 2015 there has also been slight growth in the number of registered IIHF officials who represent China. In addition, a significant number of new hockey venues were constructed over this five-year period.

It was also around this time that the Chinese began to send larger groups to Canada to train and engage with Canadian hockey actors. In 2016, China joined both the KHL and later the ZhHL, two of the most prominent male and female hockey leagues in the world. In 2020, the Shenzhen KRS Vanke Rays won the ZhHL Championship bringing China its first professional

championship in the sport. Even though both of these leagues are Russian in origin, there are several Canadians working for the teams based out of China. China also began to tap into the Canadian player market specifically targeting athletes who have Chinese ancestry. In total 10 athletes were identified as having been born in Canada but have recently gained Chinese citizenship due to their heritage and hockey skills. Many of these players currently play for the HC Kunlun Red Star or the Shenzhen KRS Vanke Rays. Aside from these athletes, there are also 58 Canadian athletes playing in the major Chinese leagues like the KHL, ZhHL and the CIHL. The production of athletes in Canada as opposed to China currently provides a quicker ‘time to market’ as the hockey development infrastructure is already in place. In time, the actors and players acquired from Canada can lead to new growth in the development of hockey in China.

Cooperation between Canada and China in the development of hockey, the joining prominent professional hockey leagues and tapping into the Canadian player market are all components of China’s Olympic development strategy ahead of the 2022 Winter Olympic Games. The awarding of these Winter Olympic Games to China has served as a catalyst for the development of the sport. Without being awarded these Games, the GAS may not have invested as heavily into the development of hockey. Tapping into the Canadian player market also provides a quicker ‘time to market’ for athletes as Canada already has the infrastructure in place to develop strong players. However, even with this massive investment into hockey development over the last several years and even with the help of Canadian actors, it is still unlikely that China will reach the medal table in hockey competitions at the upcoming 2022 Winter Olympic Games.

GPN theory proved useful in understanding the connections between Canadian and Chinese firms related to this development in addition to providing an understanding of how

Canadian actors situate themselves at an individual level and at the collective level within this development. However, this framework also had some limitations that hindered our understanding of some aspects of Canadian involvement in this development. This included limits to our understanding of the Chinese State's role as the lead firm in this development. This underdevelopment is related to travel restrictions and the inability to conduct research in China due to the COVID-19 pandemic. This limited understanding of the role of the Chinese state has also limited understanding how territorial embeddedness has played a role in Canadian firms working to develop hockey in China. Due to the Covid-19 pandemic and the travel restrictions related to this, some areas of understanding this framework remain underdeveloped, and particularly the role of the Chinese State as the lead firm.

One of the main ways Canada is aiding in the development of the sport in China is through the transfer of knowledge and hockey expertise. The transfer of knowledge can lead to the value enhancement of a product or commodity, in this case the development of players and success of hockey in China. China seeks to enhance the value of its hockey programs and players by collaborating with Canadians who they see as superior in the sport. The success of the value enhancement of hockey in China is dependent on the success of knowledge transfer between actors in this GPN. Value enhancement is also dependent on the success of hockey representation in China during and after the 2022 Winter Olympic Games. If successful, China could not only enhance the value of hockey but also obtain rent in the form of human resources rents and brand rents in the following years if they are able to further develop strong players and teams beyond 2022.

Societal embeddedness proves to be a limitation in the development of hockey in China and the transfer of knowledge between actors. Chinese actors are associated with their home

cultural customs and understanding of sports and therefore it may be hard for them to fully understand hockey from Canadians who have a different cultural understanding of the sport. This can make the knowledge transfer process between Canadians and Chinese difficult as the sport plays different roles in these cultures and in turn could limit the amount of knowledge transferred between these two groups. This could also lead to less value enhancement as there is less knowledge transferred that could aid in the further development of the sport and its players in China.

There are multiple ways and types of knowledge that are transferred between actors attached to the development of the sport in China ahead of the 2022 Winter Olympic Games. One of the ways knowledge is transferred, specifically tacit knowledge, is through the processes of socialization. This knowledge transfer process occurs through exhibition games and training and involves transferring knowledge through observation, imitation and practice. This knowledge transfer process occurs most often in this network between players and coaches on the ice.

Within China, the knowledge transfer process of combination is less prevalent between Canadian and Chinese actors. This process involves transferring knowledge through communication and collaboration among actors off the ice. The reason for lack of this knowledge transfer process is probably due to language barriers and the lack of social gatherings and discussions between Canadian and Chinese players and coaches off the ice. This limits the amount of knowledge transferred through this process and in turn hinders the value enhancement of hockey in the nation. However, in Canada this knowledge transfer process is a bit more effective as the Chinese train in areas such as Vancouver and Toronto which have higher populations of Mandarin speakers.

The transfer of tacit to explicit knowledge between players and coaches through the process of externalization is also absent in parts of this network. The knowledge transfer process of externalization occurs through continuous dialogue. This process is absent among players and coaches in this network as there is little dialog between these actors off the ice. This is due to the language barriers between the actors in China, as well as the quick turnaround of visiting Canadians. The process of externalization is more prevalent in other areas of this network such as in the business and infrastructure sectors. Knowledge transfer through externalization is more common in these sectors of the network as the firms and institutions have continuous dialogue due to their common interest. There is also less of a language barrier between firms in the business and infrastructural sectors as English is commonly used in both of these fields.

Knowledge shared through the process of externalization is also prevalent in the officiating community linking these two nations. Hockey Officials around the world use the same IIHF rules and regulations to officiate games, therefore due to common language spoken among all members of the IIHF officiating community it is easier to exchange and transfer knowledge among actors through the process of externalization as well as through socialization. This common language and transfer of knowledge among officials through the process of externalization enhances the value of hockey officials in China.

Cultural differences also play a role in the knowledge transfer process between Canada and China. As the founders of the game, hockey is culturally significant to many Canadians. The sport is also among the most popular of Canadian sports. Many children grow up playing the sport and Canada has been investing in hockey related infrastructure and programs for decades. China does not have this same history or cultural connection to the sport as it is considered new territory in the world of hockey. when it comes to the development of sports the Chinese

educational system focuses on the knowledge transfer process of internalization or the transfer of explicit knowledge to tacit knowledge. This system focuses on the development of individualized skill sets which is a strength for individual actors but hinders cooperation in team sports like hockey. While the knowledge transfer process of internalization may be good to learn about the history of the sport and aid in acquiring new individualized skills, it does little to promote team development.

Overall, we can see that there has been tremendous growth of hockey in China, (like many other Olympic sports) especially in the last decade or so in the lead up to the 2022 Winter Olympic Games. Canada has been playing a role in the development of hockey in China for several years, aiding not only the development of players and officials but is also playing a role in the development of hockey leagues and infrastructure as well. This shows how the awarding of the Olympic Games not only can create growth of sports in new markets, especially those markets which host the games, but also shows how mutual cooperation between nations aids this growth. The transfer of knowledge between Canadian and Chinese actors and the type of knowledge that is transferred plays a major role the development of hockey in China ahead of 2022. However, we can see that some knowledge transfer processes are more effective than others. The transfer of knowledge between Canadian and Chinese actors in this network, the sharing of hockey expertise by Canada, and the movement of players and teams between the two countries has helped China develop strength in what will be one of the most prominent sports at the 2022 Winter Olympics.

Postscript

Due to the current fluidity and constant evolution of the relationship between Canada and China, as well as the growing interest and popularity of the upcoming Winter Olympic games in Beijing, many articles have been published since the writing of this paper that relate back to this ever-changing relationship between these two countries, and hockey at the upcoming games. This section provides just a brief update of events involving the relationship between these two nations and updates regarding the upcoming 2022 Winter Olympic Games in Beijing.

In August 2021, Canadian Michael Spavor, was sentenced to 11 years by a Chinese court for spying, while Michael Korvig still awaits trial. In addition, Canadian Robert Schellenberg death sentence appeal to Chinese courts was rejected (McDonald & Guan, 2021). Schellenberg was originally sentenced to 15 years in prison for attempted drug smuggling but this sentence was increased to the death penalty in 2019 after the arrest of Meng Wanzhou (McDonald & Guan, 2021). This has led to increased tensions between the two nations at the diplomatic level.

Calls to boycott the 2022 Winter Olympic games in Beijing due to the mistreatment of its Uyghur population has also increased in recent weeks ahead of the games. Activists around the world continue to support boycotting the games in Beijing and human rights groups have sent letters to major broadcasters like NBCUniversal asking them not to cover the upcoming games in Beijing (Wade, 2021). However, it is unlikely that a boycott will happen as NBCUniversal paid 7.75 billion US for broadcasting right to the next six Olympics which is about 40% of the IOC's total income comes from NBCUniversal (Wade, 2021). Canada also seems unlikely to boycott these games with Secretary General of the Canadian Olympic Committee claiming boycotts are "Not the Answer" (Ritchie, 2021). When discussing whether relocation of the games was an option, Gamesbid.com producer Robert Livingston stated that "It's not going to happen" as there

is no way the event or another city would be able to host and organize the event by February 2022 (Ritchie, 2021). Therefore, due to these recent developments, it seems unlikely that Canada and other nations will boycott the 2022 Winter Olympic Games.

In September of 2022, the NHL, IIHF, IOC and NHL players union made a deal that will allow NHL players to compete in the upcoming 2022 Winter Olympic Games in Beijing (Whyno & Wawrow, 2021). This is the first time that NHL players will be competing in hockey competitions at the Winter Olympic Games since 2014. With North America and Europe being home to a majority of NHL players the teams from these continents are going to prove to be fierce competition for the Chinese men's national hockey team at the upcoming 2022 winter games in Beijing.

Overall, we can see that in recent weeks while tensions between China and Canada seem to be getting worse politically due to the Huawei affair, the conviction of Michael Spavor, and the rejected appeal of Robert Schellenberg's death sentence by Chinese courts. There are also growing calls to boycott the games due to the mistreatment of China's Uyghur population. However, Canada seems unlikely to participate in any boycott as the Canadian Olympic Committee does not think boycotts are the solution. Finally, the IIHF, NHL, IOC and NHL players union have all struck a deal which will allow professional NHL athletes to compete at the 2022 Winter Olympic Games. This will lower the Chinese men's national team's chances of medaling at the games due to fierce competition from North American and European teams.

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Appendix

QUESTIONNAIRE SAMPLE

1. Can you summarize your career in hockey? Working for X and the opportunities it has brought you?
2. Based on your experience, in the world of hockey, do you see Canada as playing an important role in expanding the sport to other parts of the world?
3. When it comes to the training of foreign game officials, does Canada as play an important role in this development?
4. Have you officiated games or participated in hockey events in China?
5. Does Canada train Chinese officials and if so, When? Where? How? Why?
 - a. If yes, what are the Canadians getting in return for training Chinese officials?
6. What kind of politics are involved in this Canada-China Hockey link if any?
7. Do you see the 2022 Winter Olympics in Beijing leaving a legacy of Winter Sports in China? Will the popularity of winter sports continue to grow post 2022?
8. How would you describe the globalization of hockey over the last 20 years?
 - a. Has the addition of the women's competition at the 1998 Winter Olympics aided in the globalization and development of the sport, especially for female athletes?
9. What were the formative steps in creating links between China's and Canada's hockey?
10. Why would China choose Canada as opposed to other hockey nations like Sweden and Finland to train its athletes, and officials?