The Migration of Indian Knowledge Workers to Canada:
A Structuration Theory Perspective

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ABSTRACT

With the emergence of the knowledge economy and concomitant changes in the areas of technology and globalization of economy and labor market, the migration of knowledge workers and particularly Indian knowledge workers has received a lot of attention. However they are different from traditional migration flows because of the choice of migration destinations, widespread demand for such workers and diminished importance of push factors. Such knowledge workers are highly adaptable and their skills readily transferable to any region of the world. Canada has to firmly establish itself as a foremost destination for migrant knowledge workers and market its attractiveness, with its safe multi-ethnic urban regions, quality of life and strong and stable economy. This is essential in obtaining the desired migrant stocks and flows, but also in securing the highest quality and most desirable migrant knowledge workers. There is considerable discussion regarding the validity and completeness of contemporary migration theories. The analysis presented in the thesis shows the advantages of the use of structuration theory in international migration and extends the claims made by Goss and Lindquist on the validity of use of structuration theory for multi level analysis in the area of international migration. The study highlights the role of structure and agency through interviews of skilled Indian migrants to Canada and subsequent analysis of the data collected. In addition recent studies by the Canadian government, academic research and reports by organizations such as the World Bank have been leveraged to develop the structuration analysis. The study proposes policy changes such as highlighting the attractiveness of Canada as a migration destination at a micro level; develop a robust mechanism for recognizing migrant qualifications, wider deployment of fast track
procedures for immigration processing and recognition of migration of semi-finished human capital as a means for meeting labor market needs.
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Appendix A
Chapter 1: Introduction

1.1 Introduction

For a few decades now, labor migration has been a major component of immigration flows to industrial nations. Australia, Canada and the United States admitted a substantial proportion of migrants based on their economic contributions. During the past few years, researchers and the general public in Canada have expressed increased interest in the nation’s past and future population growth. This interest results mainly from concerns about declining fertility and the increasing relative importance of international migration as a component of economic growth (Michalowski, 1991). Conventional wisdom has it that contemporary international movements of labor are quantitatively and qualitatively distinct from those of the past, and that the “scale and diversity of today’s migrations are beyond any previous experience” (UNPF, 1993:6). A “new age of migration” has evolved in which the international movement of workers has never been as pervasive, or as socio-economically significant, as it is today (Castles and Miller, 1993: 260).

In an historical context highly skilled migration typically involved the forced movement of professionals as a result of political conflicts, followed by the emergence of the “brain drain” in the 1960s. In the current situation, highly skilled migration is the result of the emergence of the global knowledge economy, extensive changes in work organization and practices due to the internet and communication technologies (ICT) and widespread globalization of professions especially in the area of knowledge work.
Today, highly skilled migrants represent an increasingly large component of global migration streams. Although the total number of professional migrants at any one time is unknown, Stalker (2000) estimates that there are 1.5 million professionals from developing countries in the industrial countries alone. Types of movement include permanent settlement to major immigrant receiving countries, temporary migration both within and outside multinational corporations, refugee flows and family reunion. Few countries admit highly skilled professionals on a permanent basis, but many seek them on a temporary basis, supposedly to meet skills shortages until they can train their own stock of skilled workers. Many countries deem skilled migration as a means of filling skilled labor shortages in order to ensure that economic growth is not impeded in the short term. Other countries utilize skilled migrants to improve the “stock” of brains generally. Papademetriou and Yale-Loehr (1995:2) argue that more than ever before, human resources constitute as much the wealth of a company as of a nation and immigration should play its proper role in the broader strategy for the development of a nation and its economy. The recognition of the value of migrant knowledge workers in a nation’s economy, not only to fill labor shortages but also as a means of revitalizing industry and increasing innovation activity has resulted in the increased level of mobility of knowledge workers. Migrant receiving countries have set up procedures to “recruit” the best and brightest potential migrant knowledge workers, formal procedures for permanent immigration of knowledge workers are breaking down as targeted “fast-track” processes are put in place. The current migrant knowledge workers have a choice of migration destinations and migration decisions are made through a rational critical analysis of opportunities presented by a receiving country and the individual’s personal goals.
and motivations. They have emerged as savvy, globe-trotting professionals seeking to maximize the returns to their migration decision.

Canada has made great strides in embracing the knowledge economy as well as in modifying its immigration policy to include these goals. The pre-requisites for a nation’s success in the knowledge economy is an information infrastructure, efficient innovation system of firms, universities and research centers as well as an educated and skilled population. However the commitment to mass immigration is distinctive and poses a serious challenge in the context of an overall economic strategy that emphasizes a knowledge economy, advanced education, and global competition. Immigration trends in Canada depict the increasing importance of knowledge workers. According to Citizenship and Immigration Canada (CIC) recent trends among skilled worker principal applicants suggest that the most likely scenario over the 1996-2000 is that an immigrant, classified as a skilled worker Principal Applicant, would likely be of Asian descent, male and between the ages of 25-44, destined for work in Ontario and would be classified in an information-technology occupation such as Computer Programmers, Computer Systems Analyst.

India Canada linkages have historical significance borne of complex colonial networks linking Britain, India and Canada (Walton-Roberts, 2003). India has emerged as one of the most important source of knowledge workers globally. In a 47 country ranking on brain drain based on surveys India emerged as Number 42 on “whether well-educated people emigrate or do not emigrate abroad”, or 6th from the bottom (IMD Study, 2000). India has held the first position since 1993 as a generic provider of skilled workers in the global labor market and Indians knowledge
workers are in demand in a host of different countries such as the US, Canada, UK, Australia, Germany, Japan amongst others. Skilled emigration has been disproportionately high for two kinds of migrants: the generic information technology professional with skills that are universally applicable to all fields and professions and students who are in the process of getting trained and educated in these technologies. Several researchers have pointed out that with regard to the highly skilled workers ‘migration’ may now not be the most accurate term. Instead, ‘movement’ or ‘mobility’ may be more apt terms. This is because migration has connotations of permanency or long-term stay, whereas the movement of many highly skilled persons today tends to be intermittent and short-term (Koser and Salt, 1997).

Since the onset of the 1990s, skilled labor migration has been a burgeoning and ever developing field of research. Skilled migrants, most broadly defined as those in possession of a tertiary degree or extensive specialized work experience – include architects, accountants and financial experts, engineers, technicians, researchers, scientists, chefs, teachers, health professionals, and increasingly specialists in information technology (including computing professionals, computing engineers). Studies of migration of Indian knowledge workers have raised concern regarding evidence of racism. There has been research showing the dramatic discounting of human capital acquired elsewhere (Reitz, 2002; Boyd, 1989, Li, 2003; Zong, 1998) as well as studies documenting the host of push pull factors’ contributing to this specific migration flow.
Given the increased desirability of Indian knowledge workers, the huge demand for such workers, their global mobility, and their desirability in nation-building, Canada has to establish national and immigration policy to emphasize its attractiveness as a migration destination. However current research into international migration is lacking the application of a cohesive theoretical framework for the study of Indian knowledge workers to Canada to identify what are the factors that influence individual behavior. This thesis is aimed at the application of structuration theory to contribute to an understanding of the structural factors that influence migration of Indian knowledge workers which go well beyond generic push pull factors. This thesis also examines how these factors influence individual motivations and strategic behavior and the recursive impact of individual actions in redefining structural factors.

1.2 Research Questions

The emergence of international migration as a basic structural feature of industrialized countries is apparent with the evolution of diverse multi-ethnic societies in most of the world’s developed countries and international migration trends show that this is gaining momentum. The theoretical basis for understanding the phenomenon of international migration however is still steeped in theories and assumptions set in the 19th century. At present there is no single, coherent theory of international migration (Massey, 1989, 1994). Neoclassical economics focuses on differential in wages and presents migration as an individual decision aimed at income maximization. The “new economics of migration” relax these narrow constraints to consider a variety of labor market conditions, include the household as a decision making unit, propose risk minimization and the overcoming capital
constraints as objectives. However the basic tenet of these theories still remains focused on the individual. Dual labor market theory and world systems theory ignore such micro-level decisions linking migration to globalization and market penetration beyond national boundaries or structural requirements of industrial economies. Patterns in international migration suggest that contemporary trends need multi-level analysis. However “integrative” approaches such as migrant networks have also emphasized analysis of only one level, in this case – social networks. This thesis aims to advance Anthony Giddens’ Structuration Theory as an integrative framework for multi-level analysis in international migration and build on break-through work by Goss and Lindquist in this area (1995).

The application of structuration theory in empirical research is in itself challenging, due to the absence of direction for applications in empirical research and the lack of clarity in its interpretation. However the case of migration of Indian knowledge workers lends itself to this approach due to the significance of individual motivations, rational thought and reflexivity in the migration decision as well as choice of migration location. Furthermore there are important structural factors such as the emergence of knowledge economy, globalization, internet and communication technologies which shape these individual decisions. A generic framework of structuration theory has been used to develop the fundamental research questions in this thesis. The goal of this research is to focus on three sets of issues:

1. Develop the conception of a Giddensian account of migration, identify the most significant structures within migrant institution influencing to migration of Indian knowledge workers, elucidate the rules and resources which define
these migrant institutions and illustrate how these rules and resources create opportunities or constraints for individuals.

2. Create an account of individual motivations through analysis of the strategic conduct of individual migrants as knowledgeable agents, the bounds of their knowledge and discursive consciousness as well as to understand how these individuals use their knowledge to navigate within the rules and resources of the migrant institutions.

3. Identify how individual actions recursively impact the structural characteristics of migrant institution.

The primary tool for accomplishing this is formal and informal interviews as well as secondary data sources based on prior research in this area and statistical data published by governmental agencies such as Citizenship and Immigration Canada (CIC).

1.3 Significance of the study

Through the deployment of Structuration Theory in the context of international migration, this research aims to demonstrate the value of such an analysis and contribute to establishing the validity of structuration approach in multi-level analysis in migration to move beyond the current theoretical constraints. Given the desirability of knowledge workers from India in the fabric of Canadian nation-building and the volumes of these migration flows it is critical to gain an in-depth multi-level analysis of this migration and this research seeks to demonstrate the relevance of structuration theory to get such an understanding.
The aim of this research is also to have policy recommendations to establish Canada as the foremost destination for the best and brightest Indian knowledge worker migrants. Choice of migration destinations is an effect of the internationalization of labor markets and migrants explicitly compare and contrast migration destinations. By understanding individual motivations driving the strategic behavior of the migrant knowledge worker and understanding the institutional determinants of such behavior, it is possible to make recommendations for both institutional as well as policy changes to enhance the attractiveness of Canada. Some of the institutional factors are beyond even the capacity of policy makers such as the spread of the knowledge economy, globalization and state of the Canadian economy. However this research aims to contribute to the development of immigration policies in defining migrant selection criterion, procedures for application and processing of permanent or temporary residency, migrant settlement practices and procedures for recognizing human capital from India.
Chapter 2: Literature Review, Theoretical Framework and Methodology

The migration of people across countries and continents has been a regular feature of human history. However, the quantum of international migration has now reached an extent where it has become a major factor in global change. Never before have such large numbers of people left their country of origin, either permanently or for short duration, as economic migrants, or as refugees and asylum seekers. The World Development Report (1999/2000) estimates that more than 130 million people now live outside the countries of their birth.

2.1 Migration from India: A historical perspective

In India, the migration of its labor force within and across its national boundaries is not new a phenomenon. India’s geographical position has ensured contact with the Persian Gulf region and South East Asian countries for trade in goods and movement of people, a contact which goes back to several centuries. The migration of workers on a significant scale however came much later. It began in the colonial era and continues now in independent India. Migratory flows during the period of colonial domination were viewed to the investment interests of the colonist and took place under their aegis. For instance a great part of the nineteenth century and the early twentieth century witnessed a regular migration of Indian workers as indentured labor for plantations or mines in the British colonies such as Guyana, Jamaica and Fiji, to not so-distant lands such as Malaysia and Singapore and even to neighboring countries such as Sri Lanka and Burma (Massey, Arango, Hugo, Kouaouci, Pellegrino and Taylor, 1998).
Since India’s independence in 1947, two distinct types of labor migration have been taking place. The first is characterized by a movement of persons with technical skills and professional expertise to the industrialized countries like the United States, Britain and Canada that began to proliferate in the early 1950s. The second type of migration pertains to the flow of labor to the oil exporting countries of the Middle East which acquired substantial dimensions after the dramatic oil price increases of 1973-74 and 1979 (Johnston, 1984).

In an emerging global scenario where the immediate future is viewed as the ‘age of migration’, it is imperative that attempts are made, especially in a leading labor importing country like Canada, to examine the implications of the contemporary migration flows so as to evolve a more purposeful migration policy framework aimed at the maximization and socialization of benefits from migration in the wider context of economic development. It is in the aforesaid context that an attempt is made in this thesis to detail out the trends, pattern composition and characteristics of international migration flows in the fields of migration of skilled labor, in allusion to the migration of Indian knowledge workers to Canada in the post-independence eras, especially in the last two decades.

Historically Indians are not among the earliest migrants to Canada. Even in the early twentieth century, the Canadian foreign policies did not encourage Indian immigration to Canada. This mindset is illustrated most obviously by the 1908 continuous passage Order-in-Council. However the Komagata Maru episode encouraged in forming the earliest transnational links between India and Canada challenging the aforesaid law. In May, 1914, a boat was chartered by Gurdit Singh, a
Sikh businessman from Punjab. It sailed to Vancouver, and provided passage to 376 Indians, mostly from Punjab. The majority of passengers were denied the right to land, and the boat was forced to remain anchored for two months in Burrard Inlet, before being eventually escorted out of the area under federal military control (Sampat-Mehta, 1984). Early immigrants from India were mainly Jat Sikh sojourners from Punjab, drawn to British Columbia to work in the province’s resource industries (Johnston, 1984; Sampat-Mehta, 1984). Due to the restrictive immigration policies and anti-Asian sentiment evident in early twentieth-century Canada, community formation was marked by close intra-ethnic social interaction and segmented integration (Chadney 1989). By the 1950s, immigration rules eased and permitted limited family immigration from non-European sources.

Australia, Canada and then United States admitted a substantial proportion of migrants based on their economic contribution. Many European countries have also encouraged and received labor migrants admitted ostensibly for short periods of time (Boyd, 1976). In the 1980s and early 1990s, the world witnessed a boom in the software sector of computer technology. India moved appreciably towards churning a substantial number of software engineers; with a sound knowledge of English. However the economy and the infrastructure in India proved to be inadequate to provide substantial employment opportunities for these young professionals.

**2.2 Push-Pull theory of international migration**

The vast amount of literature and the plethora of ongoing research in the field of international migration bear testimony that international migration is a somewhat fragmented discipline. The theoretical approaches to immigration that have prevailed for the past fifty years do not adequately come to terms with the
complexities of the current reality and social scientists have consequently begun to question the two pillars on which earlier models were built. At the micro-level, they question the conceptualization of migrants as rational actors responding to economic disparities between countries. At the macro-level, they question the ‘push-pull’ approach which views migration as a means of establishing equilibrium between regions of labor supply and demand. Efforts have been made to define the dominant characteristics especially with regards to socioeconomic developments (Massey, 1994).

The oldest explanation of the labor migration is perhaps the push-pull theory wherein it has been held that labor moves in search of higher wages from areas of “capital scarcity and labor abundance to areas of capital abundance and labor scarcity” (Goss and Lindquist, 1995). According to this theory, people move either because social and economic forces in the place of destination impel them to do so or because they are attracted to places of destination by one or more factors there. The competition among the migrants depresses the wage rates at the destination country and the remittances made by the migrants stimulate and boost the economy of the source country. However in reality the economic advancement at the source countries do not take-off as predicted. Besides, the theory perceives migrants as mere embodiments of labor power, their differences in ethnicity, age, sex or social class not withstanding, who aspire to move out from the home countries in allurement of better emoluments. Kearney (1986) tried to salvage the theory by qualifying that individuals respond to the expected probability of employment with higher salary in the destination land rather than the actual opportunities and hence they migrate despite the fact that prospects for work may be limited. However he admitted that the non equilibrium
qualification of the theory affects its efficacy and restricts it from being an exhaustive philosophy. A more erudite expression of the push-pull theory has been offered by Laber and Chase who viewed the phenomena as a part of “general investment theory”. According to the researchers, migration is perceived to be a part of “human capital formation” (Laber and Chase, 1971). Returns from migration between more affluent regions and less well off ones consist of a stream of expected income differentials prevailing between the two areas. In order to realize these returns, the authors feel that the migrant must invest in moving to the region of higher income.

Contemporary treatments of migration theory often begin with the almost routine reference to the demise of push-pull theory. Limitations of the push-pull theory have been revealed in critiques which note its implicit assumption of immobility, its limited ability to predict the origin of flows and changes therein, and the emphasis on the movement of people as a result of rational calculations performed by individual actors (Fernandez-Kelly, 1983; Pedraza-Bailey, 1985). The origins and authenticity of these criticisms lie in the vastly changing nature of migration from the 1960s. Four migration trends augmented pre-existing legal settlement flows to countries such as Canada, Australia, New Zealand and the United States: 1) temporary labor migration to Europe, characterized by eventual settlement (Castles, 1984); 2) clandestine or irregular migration to traditional settlement areas as well to European countries; 3) the migration of workers from third world areas such as India and Pakistan to countries such as Saudi Arabia and Kuwait where industrialization programs were underway; and 4) movement of workers to newly industrializing areas of third world
countries (Castles, 1986). The push-pull theory has been considered inadequate for studying these migration patterns.

The two major kinds of migration from India have been mentioned above. Though they are similar, in nature since in both circumstances migrants leave their home country to some other land for the sake of employment, the socioeconomic nuances vary. In this research I have dealt with white collar migration, the migration of knowledge workers from India to Canada. Attributing international labor migration to the historical push-pull theory alone has long been declared to be an unreasonable oversimplification and various theories have been subsequently propounded to analyze the phenomenon of migration. The sociological theories which help to explain such migration are Migrant Network, World System Theory and Rational Choice Theory. The theories are discussed in the following sections:

2.3 *Migrant Network Approach*

By 1980s, researchers increasingly considered migration as representing and evolving from linkages between sending and receiving countries (Salt, 1987). Social networks represented one such link in the migration systems. Networks connect migrants and non-migrants across time and space. Once begun, migration flows often become self sustaining, reflecting the establishments of networks of information, assistance and obligations which develop between migrants in the host society and friends and relatives in the sending area. These networks link populations in source and receiving countries and ensure that movements are not necessarily limited in time, and are unidirectional or permanent. This has prompted international migration studies to recognize the role of social networks, or ‘migrant networks’, as an important force in explaining the perpetuity of international migration (Boyd, 1989;
The latest emphasis in the demographic and sociological literature however, has focused on what has been coined ‘social network theory’ (Massey and Espana, 1987; Boyd, 1989). Social networks may be loosely defined as webs of interpersonal interactions, commonly comprised of relatives, friends, or other associations created in courses of social and economic activities that act as channels through which information, influence and resources flow. Migrant networks develop from social networks as individuals and groups exploit social relationships of kinship (Fawcett, 1989).

Migrant networks are defined as recurrent sets of interpersonal ties that bind migrants and non-migrants together within a web of reciprocal obligations that can be drawn upon to facilitate entry, adjustment, and employment at points of destination (Boyd, 1989; Portes, 1995). Movement of one person within a network transforms the relationship into a valuable connection that can be used by anybody within the network to facilitate migration. One implication of this thesis is that the process of being socially connected to someone who has migrated necessarily creates a migratory information feedback mechanism, where contacts act as source of information to potential migrants. As phrased by Portes, “Migration is defined as a network-creating process because it develops an increasingly dense web of contacts between places of origin and destination.” (Portes, 1995).

Several conceptual models have been employed to explain how migration networks operate. The first is the social capital model, which assumes that actors migrate to maximize returns on their investments in human capital and, in doing so, draw upon the social capital embedded in their interpersonal networks. Additionally, social
capital theory assumes that access to social connections, in the form of migrant networks, reduces the cost of movement and favors the act of migration to places where social ties exist (Massey and Palloni, 1992).

Studies comparing the earnings of immigrants show that immigrants on average earn as much as native-born Canadians (Li, 2003). However there have been concerns about the observed erosion in the earnings of more recent immigrants to Canada, that is they earn less on arrival than earlier immigrants as compared to the earnings of the native-born. Recent migrants face considerable challenges in catching up with the average earning of native-born Canadians. There is no conclusive evidence or defining study about why recent migrants earn less. In all likelihood it is a combination of factors pertaining to immigrants’ characteristics such as their level of human capital and language capacity as well as economic conditions, market valuation of foreign credentials, and the labor market that explains the changing relative performance of new immigrant.

The second model, drawing inspiration from what has been called the “new economics of migration” is the risk diversification model, designating households as the decision-making units. Households that have relatives living in destination areas, or that have members with experience in those areas, are more likely to send migrants than those who do not. (Yezer and Thurston, 1976). According to this model determinants and the decision making process of international migration must be studied at the household level, not the individual level (Stark and Levhari, 1982; Stark and Bloom, 1985; Katz and Stark, 1986). From this orientation one can extract two separate hypotheses: the first being that the decision to migrate may be to
maximize expected income of the household (which gives rise to what has been observed as ‘chain migration’), but it may also be interpreted to act like a buffer, that is, to minimize risks and loosen the constraints associated with market failures. The second hypothesis posits that households utilize their networks in order to diversify their household income. By sending a member of the household abroad to another financial market, the household can effectively distribute its financial risk. Subsequently the first member who is sent abroad can be a contact so if a condition such as market failure arises, the household can send other members to that same location by taking advantage of the bridge made by the first mover (Massey and Palloni, 1992).

2.4 World System Theory

Wallerstein (1974) had built the edifice of a migration theory based on the concepts of economics with reference to the prevalent market systems in the world. He posits a global system, the basis of which is an international division of labor, producing commodities exchanged among different zones of production and consumption.

Wallerstein designated the developed world as the core sector. Fueled by capitalism, the developed world expanded with urbanized towns, flourishing manufacturing, technologically progressive agriculture, skilled and relatively well paid labor and high investment. However the core needed margins to extract the surplus which fueled the expansion. Thus emerged the periphery world sector which was predominantly looked upon and used by the core sector nations as instrument to run their systems. The resources of the periphery nations were exploited by the core nations to feed their economy. Abundance of fertile land, natural resources and most importantly, cheap labor made the periphery nations the golden egg laying duck of
the core countries. Due to lower overhead costs, the desire for higher profits and
greater wealth lured the owners and managers of capitalist enterprises to enter poor
countries on the periphery of the world economy in search of land, raw materials,
labor and new consumer markets. Historically such market penetration was assisted
by colonial regimes that administered poor regions for the benefit of economic
interests in colonizing societies. As a result of the treatment meted out to the
periphery nations, they suffered since their technology remained stagnant, labor
remained unskilled and resources and capital were siphoned off by the core nations.
The initial differences between the core and periphery would be small but with the
continuous exploitation of the resources of the periphery, the economy of the
periphery would become stunted while that of the core would flourish, thus leading
to the widening of the gap between the two systems.

Wallerstein’s model posits a third sector as a buffer between the core and the
periphery. Societies standing between the core and the periphery in terms of
economic power fall in this category. Comprising the semi-periphery these societies,
serve as good places for investment of capital where the well-organized labor forces
of the core economies cause rapid raise in the wage rates. The semi-periphery
economies either, with further development, get promoted to the core sector or
deteriorate to the periphery.

Building on the work of Wallerstein, sociological theorists have linked the origins of
international migration to the structure of the world market that has developed and
expanded since the sixteenth century (Sassen, 1988; Morawska, 1990). They have
held that the penetration of capitalist economic regimes into peripheral, non-capitalist
societies has created a mobile population prone to migrate abroad. With the shifting of resources such as land, labor and raw material under the umbra of market economies, growing shares of the human population have been incorporated into the world market economy. The desires for better standards of living have been the allure for members of the periphery sector countries to move towards the core sector. Such movement has been facilitated by the core sector economies to satisfy their growing demands of unskilled and subsequently skilled labor since some developing countries have experienced imbalanced growth paradigms with major success in fields of technical educations, thus becoming a source of trained professionals as well.

Current international migration trends differ in the paradigm of the direction of the flow vis-à-vis migration before the latter half of the nineteenth century. In colonizing migrations early in the last century or prior, labor flowed parallel to capital mainly from core to the periphery, since the migration of capital from the core to the peripheral zones would also include the migration of technology via the skilled professionals. The unskilled cheap labor of the peripheral nations would be employed under the command of the skilled technicians who migrated from the core nations. The world system theory has analyzed mechanisms for the appropriation and transfer of surplus from peripheral to core area. In the twentieth century, migrant labor also flows in the same direction, while investment capital flows contrary to it. Such flow of investment from the core to the periphery is often encouraged by the periphery states since it generates industry and employment for the local populace often at the terms and conditions set out by the core nation organizations. The core
nation companies, in their bid to utilize cheap labor and lower overhead costs often neglect to adhere to standards of safety and security of the workers.¹

The world system is an outcome of globalization. Migration is a function of such traits. Sometimes, due to technological import and structural developments made in the periphery by core states, some periphery states would get industrialized and some core nations would be pushed to the periphery. This neo industrialization of the periphery would lead to what Sassen-Koob calls the peripheralization of the core” (Kearney, 1986).

2.5 Rational Choice Theory

The rational choice theory deviates significantly from the extant theories by considering the subjects to be individuals rather than one of the components of a group. Based on a variety of different models, Friedman and Hechter (1988) have put together what they describe as a “skeletal” model of rational choice theory. The sense of the word ‘rational’ is ‘of or based on reasoning’. The units of the rational choice theory are the individuals as actors. Actors are seen as being purposive, or as having intentionality. That is, actors, have ends or goals toward which their actions are aimed. They are also perceived to have preferences, values, utilities which they prioritize in allusion to their aspirations. Rational choice theory is not concerned with what an actor’s preferences or these sources are. Of importance is the fact that action is undertaken to achieve objectives that are consistent with an actor’s preference hierarchy viz. his priority.

However rational choice theory qualifies the actions of the actors. Although the theory starts with actors’ purposes or intentions, such desires must take into consideration at least two major limitations on action. The first is the scarcity of

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resources. Though actors aspire for high goals, they have different resources as well as differential access to other resources. For those endowed with lots of resources, the achievement of ends may be relatively easy, provided the resources have a bearing to the aspirations of the actor. However, for those with few, if any, resources, the attainment of ends may be difficult of or impossible. Related to scarcity of resources is the notion of opportunity costs. An actor may choose not to pursue the most highly valued end since the scarcity in his available assisting resources would make it difficult for him to achieve his best aim. Thus the rationale in persuasion of a goal is evaluated on the basis of the ultimate gain vis-à-vis the resources invested or interim sacrifices made.

Social institutions represent the second source of constraint on institutions. Society puts forward impediments and precincts by way of social norms, customs and practiced actions expected to be followed by all the members of the particular society. Any behavior which is strictly not in abeyance to these norms is not only considered aberrant and frowned upon but the actor also risks facing total ostracism. These institutional constraints provide both positive and negative sanctions that serve to encourage certain actions and discourage others. The standards set by different societies across the world, or sometimes within a single nation are different. It is also relevant that the standard of social values is extremely dynamic in some societies, and less flexible in others. However they are bound to change with the passage of time. This would make acts once condemned quite acceptable in subsequent times within the same society.
Another factor which Friedman and Hechter (1988) have considered relevant for making rational choices is the level of availability of information to the actors. At one time, it was assumed that actors had perfect, or at least sufficient, information to make purposive choices among the alternative courses of action open to them. However, there is a growing recognition that the quantity or quality of available information is highly variable and that variability has a profound effect on actors’ choices. This has never been truer than in the present days of the internet acting as a vast storehouse of information accessible to the fingertips of the internet browsers. However, the internet is yet to reach the world ubiquitously and certain sectors are precluded from accessing the information on the net.

In these theories rationality consists in selecting that course of action which leads to the set of consequences most preferred (Vanberg, 2002). In explaining international migration, the rational choice theory promulgates that the decision to migrate is one based on the evaluation of the costs involved or sacrifices made vis-à-vis the extra benefits received because of migration. Such sacrifices may involve moving away from families; disintegrating with peers; foregoing the pleasures of home and the problems in settling in an alien land or adjusting to the new society. Individual rational actors who decide to migrate do so because a cost-benefit calculation leads them to expect a positive net return, usually monetary, educational or training from the movement. People chose to move where they can be most productive, given their skills. However before they can capture the higher wages associated with greater labor productivity they must undertake certain investments, which include the material costs of traveling, the costs of maintenance while moving and looking for work, the effort involved in learning a new language and culture, the difficulty
experienced in adapting to a new labor market, and the psychological costs of cutting old ties and forging new ones. Therefore international migration is conceptualized as a form of investment in human capital (Yezer & Thurston, 1976).

**2.6 Evaluation of the theories**

According to Chirot and Hall, world system theory evoked mixed reactions. They said that, "Those who dislike it more or less ignore it, and those who practice it tend to take its fundamental assertions as received truths" (Chirot and Hall, 1982). Brenner (1976) has attacked the world system theory contending that this theory neglects the study of fundamental equations of economic success, technological prowess and fundamental innovation of what was happening in 16th and 17th century Europe. It was not always that ‘dependence’ created backwardness, but the opposite phenomena also held true. It has further been criticized on the grounds that Wallerstein did not consider technological prowess while studying the world system.

For purposes of the study of international migration the world system theory puts forward a plausible rationalization for the flow of migrants and the counter flow of capital in the tiered world structure. Though it is difficult to categorize the periphery and semi-periphery nations, there are distinct attributes which attract migrants from the periphery states to the semi-periphery and then to the core states. An instance of this is seen in Singapore which large number of technically qualified Asians choose as a first destination or a launching pad, for western destinations. With the victory of the processes of globalization, nuances of international migration between the various world economy sectors are expected to be clarified and societies further open to the migrants. The world system theory aims to explain international migration in such a vein.
The migrant network institution, described in the migrant network theory has been perceived as a “position-practice-system” by Bhaskar Roy (1979). It is evident that attributing international migration to only one theory would be a fruitless oversimplification of reality. Not all migrants, due to a number of social factors, are willing to extend their co-operation to the aspirants back home. Neither do all migration aspirants depend on the feedback provided by immigrants. The network can at best be considered akin to a set of social roles played by individuals. The key element of the escalating recent international migration is the chemistry working for international and national institutions transcending geographical boundaries in linking employers in the developed or rapidly developing economy to the individuals in the developing or the least developed worlds. The migrant network is a plausible component in this process. Though Monica Boyd (1989) argues that social networks based on kinship, friendship and community ties are central components in migration systems analysis, for knowledge workers and software professionals this has played a restricted role. The experiences of the forerunners would have encouraged such migrants, but most of them would touch shore with an employment offer at hand and would build from there.

The utility of the rational choice approach, lies in the fact that functional models of population movement are based on modernization theory and neoclassical development economics, which conceive migration as the means by which surplus labor in a largely agricultural economy is transferred to the urban industrial sector providing for economic growth and a psychological reorientation of the migrant in the process (Ranis and Fei, 1961). Rational choice theory uses a “microsocial approach” in recognizing that social processes are merely the aggregate of individual
actions. According to Goss and Lindquist (1995), in tune with what has been stated earlier, the rational choice approach makes the assumptions of methodological individualism. Though it is economics which still holds the position of the chief player in international migration, the rational choice theory, considering humans as individuals capable of making rational choices, stands unique.

The aforesaid theories deal only with the economic reasons of migration. The allure of financial benefits influences the selection processes of the rational choice theory. It is the economic disparities which create the three world systems in Wallerstein’s distinctions about the world. The network theory also has its philosophy rooted in the desire for higher emoluments. However the present mode of migration of labor, both skilled and unskilled is mostly through institutions and bureaus which act as liaisons between the interested employers and the prospective employees. Keen observers of the international employment scenario, these agencies supply suitable workers to the multi national companies and other employers looking for labor overseas. Though the network theory also involves a second party who influences or assists the immigrants to migrate, most of the present international migration is through the agencies, and therefore the role of the agency, for the concept of migration can not be undermined.

2.7 Contrasting structuration theory with existing migration theories

The agent-structure problem is really two interrelated problems. The first issue concerns the nature of both agents and structures - what kind of entities are these and how are they interrelated? There are two basic ways to approach this question: by making one unit of analysis more significant than the other, or by giving them equal status. On the basis of which entity is given higher significance, these approaches
generate three possible answers to the ontological question, which can be called individualism, structuralism, and structurationism (Jackson, 1999). Rational choice and world system theory embody, respectively, the first two of these positions, both of which ultimately give one unit of analysis higher significance over the other. Rational choice theorists reduce structure of the global market to the properties and interactions with the individual, while world-system theorists reduce state agents to effects of the reproduction of capitalist world system. The structurationist approach, on the other hand, tries to avoid the pitfalls of individualism and structuralism by giving agents and structures equal ontological status. Structuration theory does much more than synthesize the “best of both worlds,” structuration requires in-depth understanding of the agent-structure relationship. This conceptualization forces us to rethink the fundamental properties of (state) agents and system structures and therefore permits us to use agents and structures to explain some of the key properties of each as effects of the other, to see agents and structures as co-determined or mutually constituted entities.

The principal weakness of a structuralist solution to the agent-structure problem is that, because it cannot “explain anything but behavioral conformity to structural demands,” it ultimately fails to provide a basis for explaining the properties of deep structures themselves. It may be, for example, that the division of the world system into three distinct structural positions (core, semi-periphery, periphery) is functional for the reproduction of capitalism, but this does not explain why the system developed that particular structure, nor does it guarantee that the structure will endure (Wendt, 1987). However there is similarity with rational choice theorists in one critical dimension, world-system theorists duplicate the rational approach to the
agent-structure problem by implicitly emphasizing one over the other, in this case the structure of the world system, and then try to reduce other entities, such as state and class agents, to its effects and by doing so provides merely an incomplete analysis.

Structuration theory provides a solution to the agent-structure problem by recognizing that human action instantiates, reproduces, and transforms those structures. Structures have reproductive requirements which, for whatever reason, agents implement. Structuration theory however opens up a new issue, one which does not concern the inclusion or exclusion of agents per se from social theories but rather the terms of their inclusion into those theories. In this thesis, though the aforesaid theories have been relied on, I have tried explaining the process of migration of the knowledge workers using the structuration theory of Anthony Giddens, my primary hypothesis in application of structuration theory is that interaction between structure and agency lead to set acts and practices, which, with the passage of time, form a set behavioral paradigm which the migrants rationally follow.

2.8 Theoretical Framework

The theories discussed above establish the fact that the issue of international migration has been subjected to a variety of explanations. Scholars have interpreted the subject in several ways, mostly based on socioeconomic principles. Giddens’ structuration theory deviates from this conventional design, and treats the subjects as rational individuals with the capacity to reflect and more importantly, as has been explained in the previous section, cause changes. The migrants not only settle in the host countries but they build intra-community and inter-community ties in the host
social structure. The knowledge workers have developed professional and personal camaraderie in the local circles and have integrated in the Canadian societies. The process of integration, thus moving beyond the realm of economics, prompts to an analysis that allows for the capacity of the migrants to reflect and adjust and modify the social settings to their convenience. The goal of the present discussion is to provide an overview of Giddens’s conception of structuration focusing on the key ideas of the structuration theory which have been applied to the present study.

2.8.1 Introduction to Structuration Theory: The relationship between agency and structure is among the most pervasive and intricate issues in social theory. It has been the cause of a number of deeply entrenched social disputes “stretching from the late medieval differentiation between the individual and the state to contemporary meta theoretical controversies within science, epistemology and political philosophy” (Carlsnaes, 1992:245). “The capacity of humans to be reflexive - to think about their situation - is the ability to change it” (Pozzebon, 2004: 253). This might have been the driving thought for Anthony Giddens while propagating structuration as a theory with agency as a key component. Any action is perpetrated by will or by reactive response. Intention or will plays an essential role in dictating the actions of the agent. According to Giddens, “the notion of action” is a debated issue, and he has clarified, “I take the concept to refer to two components of human conduct, which I shall call ‘capability’ and ‘knowledgeability’ ” (Giddens, 1982:9). According to Cassell (1993), agency does not refer to the intention of people in doing things but rather to their capabilities of doing those things in the first place.
Giddens has supported this view and departed from the idea of agency as something just restricted within the individual. Human agency, also known as “transformative capacity” in Giddens’s formulation, is the ‘capacity to make a difference’ (Giddens, 1984a:14). According to Giddens, individual interaction and social actions involve communication of meaning, the moral justification of behavior and the exercise of power in order to influence the behavior of others (Giddens, 1984a). Power is not a resource itself but involves the exploitation of resources. “Resources are structured properties of social systems, drawn on and reproduced by knowledgeable agents in the course of interaction” (Giddens, 1984a:15). Resources are of two kinds: authoritative resources, which derive from the coordination of the activity of human agents, and allocative resources, which stem from control of material products or aspects of the natural world (Goss and Lindquist, 1995).

According to Giddens, “The production and reproduction of the social systems (takes place) through members’ use of rules and resources in interaction” (1984a:298). Giddens regards ‘social systems’ as “relations of interdependence, involving the situated activities of human subjects, and existing ‘semantically’ in the flow of time” (Giddens, 1982:35). Production takes place when people use rules and resources in interaction within the ambit of society. Reproduction occurs when actions reinforce features of the systems already in place. Through repeated invocation of rules and exploitation of resources in social actions and interactions, individuals reinforce and fashion social practices into institutions. These are the constituents of the social system.
2.9 Key Concepts of Structuration Theory

2.9.1 The stratification model of human action: Giddens has held that individuals are knowledgeable within the available parameters and constraints in a society. Since according to Giddens individuals have knowledge, they can also be called conscious actors. Consciousness has been distinguished into three levels: the discursive consciousness, practical consciousness and unconscious activities. All actors experience all the three levels of consciousness and act accordingly. Discursive consciousness may be called the active, considered consciousness. For Giddens, “actors are not inherently engaged in existential reflection on the meaning of their conduct from moment to moment in everyday life” (Craib, 1992). Practical consciousness is the knowledge of personal motivations and institutional rules and resources and can be exploited to provide rationale for action, but can not be readily verbalized. Unconscious activity, Giddens argues is the unconscious need for feelings of familiarity and practical mastery of the stable features of the social world. As these practices are repeated, this means social reproduction of these, and such routine tends to eliminate “anxiety-producing anomie” (Cohen, 1989: 97).

For Giddens, “actors are not inherently predisposed to sustained reasoning or existential reflection on the meaning of their conduct from moment to moment in everyday life” (Giddens, 1982:30). Rather, discursive consciousness emerges at critical times – expected or unexpected. In these circumstances, “actors mobilize their efforts and focus their thoughts on responses to problems which will diminish their anxiety, and ultimately bring about social change” (Sewell, 1992:9).
2.9.2 Systems and structures: Giddens has defined structure as “rules and resources recursively implicated in social reproduction; institutionalized features of social systems have structural properties in the sense that relationships are stabilized across time and space” (1984b:127). Structure can be ‘conceptualized abstractly’ as two aspects of rules - normative elements and codes of signification. Rules have been defined by Giddens as techniques applicable in “enactment/reproduction of social practices” (Giddens, 1984a: 21). Giddens has explained that, “To know a rule is to know, then, what one is supposed to do, and others are supposed to do, in all situations to which the rule applies, or potentially applies” (Giddens, 1977:131). Giddens has classified rules into two categories: Semantic rules or the interpretive schemes through which individuals make sense of reality and moral rules or norms guiding social behavior (Heracleous and Hendry, 2000).

Structure “exists only as memory traces, the organic basis of human knowledgeability, and is instanciated in action” (Giddens, 1984a:377). Structure, in social analysis, refers to the structuring properties allowing the ‘binding’ of time and space in social systems, the properties which make it possible for discernibly similar social practices to exist across varying spans of time and space and which lend them a ‘systemic’ form. To say that structure is a ‘virtual order’ of transformative relations means that social systems as reproduced social practices, do not have ‘structures’ but rather exhibit ‘structural properties’ and that structure exists, as time-space presence, only in its instantiations in such practices and as memory traces orienting the conduct of knowledgeable human agents’ (Mouzelis, 1989). Importantly Giddens regards structure not merely as constraining, but also as enabling. The fact that Giddens’s structure presumes human agents to be ‘knowledgeable’ and ‘enabling’ would imply
that the agents are capable of utilizing these attributes to do creative and innovative work. If a number of powerful people indulge in innovative work, the effect of their collective actions can be capable of changing the structure which actually permitted them to work (Sewell, 1992).

Systems and structures are closely related concepts in the theory of structuration, but Giddens distinguishes them. Systems are “patterns of relations in groupings of all kinds, from small, intimate groups, to social networks, to large organizations” (1979:80). That is, it is the patterns of enacted conduct, the repeated forms of social action and interaction, or the “enduring cycles of reproduced relations” that form social systems (Giddens, 1984a:131) For Giddens, structure is somewhat more specific and detailed and refers to practices which are structured along certain lines. Structures such as market exchange, class structures, political organizations and processes, and educational institutions all have these aspects to them. These structures are formed by structured practices – that is, they do not just exist in and of themselves and they cannot exist without enacted conduct. While we may abstract these structures, and refer to them as large-scale structures that affect us, Giddens forces us to consider how they are reproduced. It is enacted human conduct in the form of structured practices that maintains and reproduces these structures.

The value of Giddens’s systems and structures is to provide a means of bridging the structure-agency gap, focusing on systems and structures as patterns of enacted conduct. At some level we may consider these as existing apart from the individual, but if social action and interaction were to end, it is clear that social structures would no longer exist. In order to think like Giddens, consider structures as structured practices – that is a means of always connecting praxis and structure. That is, praxis
does not exist apart from structure, and structure is enduring patterns of action guided by rules and resources.

2.9.3 The duality of structure: Giddens has recasted the two independent sets of phenomena (dualism) of structure and agency as a ‘duality’ - two concepts which are dependent upon each other and recursively related. ‘The structural properties of social systems are both medium and outcome of the practices they recursively organize’ (Giddens, 1984a: 25). Social structure and human interaction are broken down into three dimensions (solely for the purpose of analysis) and the recursive character of these dimensions is illustrated by the linking modalities. Thus, as human actors communicate, they draw on interpretative schemes to help make sense of interactions; at the same time those interactions reproduce and modify those interpretative schemes which are embedded in social structure as meaning or signification. Similarly the facility to allocate resources is enacted in the wielding of power, and produces and reproduces social structures of domination, and moral codes (norms) help determine what can be sanctioned in human interaction, which iteratively produce structures of legitimation.

A fundamental theme underlying Giddens’s work is the rejection of a whole range of dualisms that have characterized social thought, especially the dualism of structure and agency, and the reformulation of such dualisms in terms of dualities. He sees interpretative sociologies as ‘strong on action but weak on structure’, and functionalist and structuralist sociologies as ‘strong on structure but weak on action’ (Giddens, 1993:4). The concept of the ‘duality of structure’, central to Giddens’s theoretical scheme, emphasizes that ‘social structure is both constituted by human
agency and yet is at the same time the very medium of this constitution’ (Fuchs, 2003). Rather than seeing action and structure as the counter-acting elements of a dualism, we should regard them as the complementary terms of a duality, the ‘duality of structure’. By the duality of structure, Giddens means, the social structures are both constituted by human agency, and yet at the same time are the very medium of this constitution- every act of production is at the same time an act of reproduction: the structures that render an action possible are, in the performance of that action, reproduced. Every action that disrupts the social order, breaking conventions or challenging established hierarchies, is mediated by structural features which are reconstituted by the action, albeit in a modified form. This intimate connection between production and reproduction is what Giddens calls the ‘recursive character’ of social life (Thompson, 1989). Daily practices such as communicative actions are the main substantive form of the dimensions of the duality of structure, which is instantiated, reproduced and potentially changed through such practices (Barley and Tolbert, 1997). Daily practices according to Giddens are implicated in continuous processes of structuration (Giddens, 1981). Adequate understanding of structurational processes entails in-depth involvement in the routinized, daily interactions of knowledgeable agents in order to discover the conditions influencing the continuity or change of social and organizational structures (Heracleous and Hendry, 2000). Giddens’s work can be located in the theoretical tradition that aims to transcend the structure–agency dualism and to reconcile interpretive and functionalist sociological views, in common with the work of such theorists as Roy Bhaskar (1979), Pierre Bourdieu (1977), and D. Silverman (1970). Each of these approaches is different, but they all share the concern of bridging the gap between action and structure in social life, the recognition that, in the study of social systems,
understanding individual actors’ meaning is of paramount importance, and the proposition that meaning, and therefore social reality, is constructed, sustained and changed through social interaction.

2.9.4 Structuration: Structuration is therefore the process whereby the duality of structure evolves and is reproduced over time space. Agents in their actions constantly produce and reproduce and develop the social structures which both constrain and enable them. ‘All structural properties of social systems...are the medium and outcome of the contingently accomplished activities of situated actors. The reflexive monitoring of action in situations of co-presence is the main anchoring feature of social integration’ (Giddens, 1984a: 191).

Giddens has held that “to be a human agent is to have power, to be able to ‘make a difference’ in the world” (Giddens, 1982:196). A pertinent question is whether all humans are empowered agents. How about bonded laborers or prisoners in captivity? According to Giddens, “the seemingly ‘powerless’ individuals are able to mobilize resources whereby they carve out ‘spaces of control’ in respect of their day-to-day lives and in respect of the activities of the more powerful” (1979: 64). He refers to ‘dirty protests’ and the hunger strikes in Northern Ireland as a means by which the prisoners use their resources against the controllers. This is what Giddens has called the ‘dialectic of control’. He has held, “By the dialectic of control I mean the capability of the weak, in the regularized relations of autonomy and dependence that constitute social systems, to turn their weakness back against the powerful” (Giddens, 1982:39). In recent times, the international condemnation of the tortures and humiliation suffered by the Iraqi prisoners in the Abu Ghraib prison, propelling the American government to demolish the prison and punish its Commander, reinstates
Giddens' views. Trade unionism is also a manifestation of the dialectic of control mechanism.

2.10 Critique of Structuration Theory

Giddens's theory of structuration has undergone strict evaluation by other social scientists. Giddens's definition of structure has been criticized for being too narrow and misleading for the purposes of crafting a social theory. The normal use of the word “structure” hinges on an analogy with physical structures external to individual agents: social structure constitutes the social system of institutions within which individuals act. Giddens, however, distinguishes social structure from the social system and defines structure as the rules and resources exploited by agents in producing and reproducing a social system over time. This definition of structure comes nearer to that in structural linguistics or anthropology than to that in sociology (Callinicos, 1985; Layder, 1987, 1994). The theory of the duality of structure would perhaps have been more stable if the term ‘structure’ had been defined conventionally.

Giddens's structuration theory has been criticized by numerous scholars from both structural and agency perspectives as reducing one perspective to the other or conflating rather than bridging the two (Callinicos, 1985; Willmott, 1986; Layder, 1987; Held and Thompson, 1989; Byrne, 1991). Archer (1996) argues that conflating structure and agency weakens their analytical power. This has led to the criticism that Giddens does not so much resolve the dualism of action and structure, as offer victory to the knowledgeable human actor, in a particularly modern and liberal tradition of thought (King, 1998). It has also been argued that such conflation of agency and structure is vulnerable to a reductionism whereby one (usually agency)
dominates the other. Critics have felt that when structures are rules and exist only by virtue of individual agency, then the theory seems to have become individualistic in character abandoning the prospect of structures constraining action (Archer, 1990). The lack of concrete empirical example in his own work, together with its abstract conceptual focus, similarly offers few clues as to how to proceed in the everyday world in the gathering of useful understanding, and its reflection back into the world of practice. Clark (1990) has aptly summed structuration theory as a ‘series of interrelated propositions.’

2.11 Application of Structuration Theory to Migration

Structuration theory, though not a panacea for all issues relating to international migration, is important for breaking free from the conventional traditional migration theories based on economic models and migrant networks which provided a rather deficient analysis of the theme. The conventional theories are inadequate in explaining the role of the agency and its effect on structure in the arena of international migration. Functionalists ascribe the expanded time space distanciation of contemporary migration to demand and supply in international labor markets. The structuralist argument can be summarized as emergence of a global capitalist economy and uneven development. While both these arguments are undeniably true, they are also incomplete. The emergence of large national and international institutions that transcend the boundaries of states and locales is a key component of analysis of international migration which is missing in these analyses. Integrative approaches suggest that successful migration experiences are emulated by friends, relatives and others thereby evolving into migrant networks. Structuration theory provides the basis for inserting the individual agent into a recursive relationship with
structure. Giddens examines the recursive relationship between knowledgeable and capable human beings or agency and the wider social structures and systems. In recognizing the duality of structure and agency, Giddens has opened up the possibility for the migration researcher to break out of the strictures of either seeing migrants as independent actors behaving in a voluntarist fashion or as puppets whose actions are entirely determined by structural mechanisms.

From Giddens's theory of structuration we can draw upon conception of agency and structure, notion of institutions as sedimented social practices, effect of rules and resources or 'modalities of interaction' within institutions and time space distanciation to construct a framework for understanding international migration. International labor migration can therefore be presented as the process by which individuals cross the limitations of presence-availability and cross boundaries between locales in order to establish presence and control over resources in a distant place (Goss and Lindquist, 1995). The result of the institutionalization of migration is a complex institution consisting of knowledgeable individuals, and agents of organizations such as migrant associations to the global labor market and other institutions such as kinship or the state with considerable time-space distanciation. Potential migrants have to employ their understanding of the rules and exploit allocative and authoritative resources within the migrant institution in order to successfully migrate.

Giddens suggests that the application of structuration theory in empirical research be focused on two distinct levels. At one level the researcher should conduct an examination of the rules and resources within institutions and the opportunities and constraints created by these institutions. With an understanding of this creation and
mediation between structure and agent, we move from a conceptualization of a ‘migrant network’ to a Giddensian ‘migrant institution’. The migrant institution therefore comprises the medium through which all involved in the migration operation must go about their daily activities and engage in decision-making processes. The other level is an account of individual motivations – analysis of strategic conduct of individuals as knowledgeable agents, the bounds of their knowledge, their discursive consciousness and the dialectic of control. These two levels are by no means dichotomous since both operate in all forms of social interaction. An analysis of institutions cannot be undertaken without considering the individual whose actions are what determine and reproduce institutional practice. In this way, both the structure of the migrant institution and the individual agent are mutually dependent and important in understanding the process of international migration. The routinization of social practices of migration and strategic action of individuals leads to sedimentation of these practices and the reproduction of these social practices leads to the structuration effect of migration. According to this basic framework, this thesis presents the rules and resources of migrant institution as key to migration of knowledge workers from India, identifies the impact on individual strategic behavior of migrants and presents the structuration effects of such migration flows.

2.12 Methodology

To gain an understanding of the structuration of migration of Indian knowledge workers, a series of in-depth interviews were conducted to uncover the two levels of structuration as recommended by Giddens. Interviews were preferred to other tools of migration research such as ethnographic surveys because the focus of this analysis is to gain an understanding of individual motivations and interviews are the best tool
enabling such an analysis. Statistical research methods using demographic data are useful in conducting regression or covariate analysis to summarize behavioral trends but cannot give the insights the thesis needs. The aim of the thesis is to understand the motivations of migrants as rational and knowledgeable agents.

Qualitative research has its own pitfalls, especially regarding completeness of data - the type of information collected and more importantly the data which remains uncollected. Care and adequate planning were taken to ensure the objectivity, completeness of data collected and ensure reflexivity of the interviewer (myself). Interviews were conducted on the basis of a prepared questionnaire while maintaining the flexibility to probe on certain lines of questioning when presented with the opportunity. One objective of the interviews was to elucidate individual motivations and analyze the strategic conduct of individuals as knowledgeable agents, the bounds of their knowledge and their discursive consciousness. The other objective was to gain an understanding of the rules and resources within migrant institutions and the opportunities as well as constraints created by these institutions. The ultimate objective of this exercise was to reveal relationships between the two and create a cohesive framework through the application of structuration theory.

Key institutions identified through literature based research and interviews are immigration regime of Canada, the knowledge economy and its influence on the Canadian labor market, recruiting agencies and other brokers of information and universities and other institutions of knowledge or training. The interview lasted about an hour and were conducted in neutral places to ensure comfort and responsiveness of interviewees. Audio recording and notes was used to capture data and information and ensure reflexivity on my part.
The interview first focused on a series of questions to identify certain common characteristics, demographics or similarity of educational background amongst migration of semi finished human capital. This section was aimed at getting a broad representation in interview subjects as well as to provide means of classification of interview responses. Secondly, the interview dwelled on the strategic conduct of migrants which started out as broad discussion on decision factors on migration. This was aimed at gathering information regarding the gamut of factors which drive the practical consciousness of the migrant knowledge worker. Analysis of this section provides data to construct the rules and resources which define migrant institutions and the constraints and opportunities experienced by migrant knowledge workers. This section also probed as to how these potential migrants compare and contrast other traditional receiving countries such as the United States and Australia. The results of this section interview uncover that this particular class of knowledge workers unlike their predecessors have multitude of choices and these results could potentially uncover several shortcomings of various migrant institutions in Canada. Other important aspects of structuration of Indian knowledge workers explored in the interview are information flows, sources and brokers of information which condition migrant behavior to further illustrate operation of rules and resources within migrant institutions and the structuration effects of such institutions. A section of the interview also focused on the institution of migrant networks give key insights into the operation of this institution especially in campuses in Canada where they have had a significant impact. In depth analysis of the interviews was used to develop the structuration argument of migration of Indian knowledge workers and comments and quotes presented in the following chapter obtained during the interviews presents insights of individual motivations and behavior.
Care was also taken to ensure objectivity and completeness through the selection of interview candidates. I took 15 interviews in all and a balanced mix of interview candidates was selected. There were three numbers of women in the total; this minority of women is an extension of sociological factors that have limited involvement of women in the areas of technology. The interviewed candidates represent both migrant knowledge workers as well as students who belong to the class of migrant “semi-finished” human capital. The interviewees also included both recent migrants as well as potential migrants who are temporary residents in the process of migration. Most of the interviewees were residents of Saskatchewan and students at the University of Saskatchewan. However care was taken to ensure representation from individuals who had recently moved to Saskatchewan from elsewhere. The students at the University of Saskatchewan provide a good representation of student migrants as most students here had applied to multiple schools in Canada and elsewhere and the results can be extrapolated to include migration of semi-finished human capital elsewhere in Canada. The focus of the interviews was on migrants who could be regarded as semi-finished human capital, primarily undergraduate and graduate students at the University of Saskatchewan because this is a hitherto under researched area with few secondary data sources, while several studies have been conducted on migrant Indian knowledge workers. The interviewees were identified by snow balling techniques and an initial screening was undertaken to ascertain the suitability of the interviewee.

The data collection was done in Saskatoon, Canada. I used face-to-face interviews. The respondents were first asked to sign consent forms. The respondents selected were chosen on the basis of their gender, major and marital status. Among the fifteen
interviewees, two women and four men were married, all others were single. The respondents chosen were contacted personally and invite to participate. I got the list of Indian students from the Indian Students Association and contacted them through snow balling technique. After agreeing to participate, participants chose the date, time and location of our meetings. All participants were assured confidentiality and were also informed of their right to withdraw from participation at any time or decline to answer any question. However, the participants were quite accommodating and open and answered all questions that I asked. Some participants asked me questions before and during our interview and I was honest with them in my answers including why I was interested in this topic. I also received permission from participants to record conversations. All audiotapes, interview notes, data analysis notes, participant contact information and any other information related to the study were locked safe when not in my own exclusive use. I completed all the transcribing and data analysis myself which not only ensures privacy and confidentiality of participants but also provides greater accuracy and uniformity in interpreting participants' responses.

There was also significant use of secondary data and analysis in developing the arguments presented in the thesis. There is a wealth of information and statistics on Canadian government sponsored migration and policy research studies as well as routinely published data and statistics in government bodies such as Citizenship and Immigration Canada (CIC) and Statistics Canada. These sources of information were leveraged in developing of a conception of migrant institutions and in highlighting the rules and resources which constrain and enable individual action.
In the following chapter the key migrant institutions are identified together with a
discussion of the rules and resources within these institutions and their application to
the migration of Indian knowledge workers.
Chapter 3: Structuration of migration of Indian Knowledge workers

This section presents a structuration analysis of migration of Indian knowledge workers at two levels. Giddens has stated that structure is defined by rules and resources. In completing structuration analysis at one level the procedural rules as well as allocative and authoritative resources defined by migrant institutions are discussed. On another level, this chapter investigates how these institutions influence individual motivations. The two aspects of structuration are analyzed cohesively so as to illustrate the duality of structure and agency and demonstrate how agency recursively redefines and reiterates structure. Interviews were used as a tool to identify and gain an understanding of the key migrant institutions that influence and determine the strategic behavior of individuals and the dialectic of control. In addition recent studies by the Canadian government, academic research and reports by organizations such as the World Bank have been leveraged to develop the structuration analysis.

The key institutions influencing the migration of Indian Knowledge workers were identified to be the knowledge economy and its influence on the labor market, Canadian immigration regime and policies, universities and other institutions of education and learning and brokers of information. This section presents the structural properties of these complex migrant institutions and their influence on individual motivations.
3.1 Knowledge economy and labor market

3.1.1 The knowledge economy: Perhaps the most important dimension of institutional change affecting newly-arriving immigrants is the emergence of what has been called a ‘knowledge economy’, including the dramatic expansion of the role of education in labor markets. Traditionally, neo-classical economics have recognized only two factors of production; labor and capital. Paul Romer, a Stanford economist, has proposed modifications to the neo-classical model by recognizing technology and the knowledge on which it is based as an intrinsic part of the economic system (Romer, 1995). Knowledge has become the third factor of production in leading economies.

According to a World Bank Report (2004), a knowledge economy rests on four pillars:

• A supportive economic and institutional regime to provide incentives for the efficient use of existing and new knowledge and the flourishing of entrepreneurship.
• An educated and skilled population to create, share, and use knowledge.
• A dynamic information infrastructure to facilitate the effective communication, dissemination, and processing of information.
• An efficient innovation system of firms, research centers, universities, consultants, and other organizations to tap into the growing stock of global knowledge, assimilate and adapt it to local needs, and create new technology.

3.1.2 The knowledge worker: Both private capital and the state are engaged in the active recruitment of highly skilled knowledge workers, defined as having a university degree or extensive equivalent experience in a given field, to fulfill labor
shortages and meet developmental needs. Peter Drucker coined the terms “knowledge worker” and “service worker” to classify the divergent emerging employment categories (Drucker, 1993). Knowledge workers would constitute the highly educated, intellectual, technocratic and managerial elite in the Druckerian definition. While knowledge workers would be global, service workers who lack the necessary education of knowledge workers would remain localized and earn low wages. A particular occupation that has come to resemble closely the description of “knowledge workers” is that of the information technology (IT) professional (Khadria, 2001); others could be doctors, researchers, engineers, architects and so on.

3.1.3 Impact of knowledge society on the global economy and labor markets: As a result of the knowledge society, knowledge is being developed and applied in new ways. Information and communication technologies (ICT) have revolutionized the transmission of information and investments in ICT sectors such as computer hardware, software, semiconductors, and telecommunications have come to dominate the investment priorities of businesses and governments worldwide while producing dramatic improvements in efficiency and productivity. Product cycles have become shorter heightening the need of fast paced innovation. International trade has increased – increasing competitive pressures on producers and small and medium employers have become very important players in the economic system (World Bank Report, 2004). The knowledge economy has effectively revolutionized the workplace as well as the way work is carried out.
The knowledge economy has also transformed the demands of the labor market in economies throughout the world. In industrial countries, where knowledge-based industries are expanding rapidly, labor market demands are changing accordingly. Where new technologies have been introduced, demand for high-skilled workers, particularly high-skilled information and communication technology (ICT) workers, has increased dramatically. To ensure wealth creation, a country must be willing to make investments in technology and subsequently to produce or acquire the human capital required to drive results from these investments. The knowledge economy has conditioned the socio-economic policies of most nations to include immigration policy as an integral part of development efforts. Most governments actively facilitate the mobility of IT professionals and other knowledge workers in a bid to meet labor market shortages and propel their nation to the forefront of the knowledge economy. Besides Canada several countries such as the US, Australia, Germany, Austria, France, Iran, Ireland, Italy, Japan, Malaysia, Norway, Singapore, South Korea, Spain, Turkey and the UK have also sought to recruit Indian software engineers with immigration or temporary worker programs (Krishnadas, 2000).

3.1.4 Transition of the Canadian Economy: Canada's transition to a knowledge economy is very well documented, as illustrated by several research papers and government funded studies. According to a study by Statistics Canada Micro Economic Division, the knowledge segment of the workforce has grown at about the same rate over each of the last three decades. Only 44% of professional occupations had a post secondary degree in 1971 but 68% had such a degree in 1996. Increases in the share of employment in knowledge occupations have occurred across
all regions. Ontario and Quebec experienced the greatest percentage point changes (Beckstead and Vinodraj, 2003).

3.1.5 Institutional characteristics of the Canadian labor market for knowledge workers: These developments in the Canadian labor market have altered the availability of human capital resources. Increased gap in demand and supply has led to intense competition within developed nations for knowledge workers, especially information technology professionals. According to the study quoted above (Beckstead and Vinodraj, 2003), there has been a gradual increase in jobs in the knowledge sector. This contradicts the popular view that a dramatic expansion of such jobs has occurred. Therefore the imbalances in the labor market seem to be driven primarily through the supply side.

The global mobility of IT professionals in general, and Indian IT professionals in particular, has attracted considerable attention amongst the media, policy makers and even academics. Canada has also seen a substantial migration of knowledge workers and IT professionals in particular. According to the Citizenship and Immigration Canada summary of recent trends among skilled worker principal applicants, the most likely scenario over the 1996-2000 periods would suggest that an immigrant, classified as a skilled worker PA, would likely be of Asian decent, male and between the ages of 25-44, destined for work in Ontario and would be classified in an information-technology occupation. Computer Programmers, Computer Systems Analysts, Electrical Engineers, Mechanical Engineers, Civil Engineers are included in the 1996-2000 and 2000 top 10 occupations list. The trends are even more extraordinary. Computer programmers (NOC code 2163) and Computer Systems
Analyst (NOC code 2162) show an increasing trend in their share of the skilled worker category from 9.6% and 6.3% respectively in 1996-2000 to 12.5% and 7.4% in 2000. Electrical and Electronic Engineers (NOC Code 2133) and Mechanical Engineers (NOC Code 2132) also show an increasing in their share of skilled worker category from 6.1% and 5.2% respectively in 1996 to 7.2% and 6.7% in the year 2000. Secretaries on the other hand have reduced from 5.1% to 4.7%.

When pronounced imbalances in supply and demand of labor exist one would expect it to get rectified and reversed in the long run. However the institutional characteristics of knowledge worker labor market, especially characteristics of jobs in the IT arena, are such that they can easily be displaced to the lowest cost region of the world, thereby making the labor market for knowledge workers global with workers in the developed countries having to compete with workers in lowest wage areas of the world. These same characteristics make it relatively simple to supplant migrant knowledge workers in Canada into these positions.

Knowledge work is highly fluid in terms of skill requirements; One skill or technique is often superseded and then displaced by another which attains domination in the particular area. On the job experience is critical to development of human capital of knowledge workers. Also there exists high level of inter region mobility and largely unfettered by unions and other labor or professional organizations. Due to the importance of private global capital in the area of information technology, the standards of professional accreditation, (which had been a major obstacle for the international mobility of other professionals such as doctors) are set mainly by major multinational corporations such as Microsoft, Oracle, PeopleSoft and SAP rather
than by national professional bodies (Xiang, 2001). ICT has made knowledge workers boundary-less in the sense that a bulk of the development work can be conducted in a different locale leading to the broad trends in outsourcing and off-shoring. This has resulted in agglomeration of particular skill set in lower cost regions. Regional agglomeration of skills in the knowledge economy are well documented and India has gained recognition for being one of the top destinations for IT and knowledge work.

Knowledge work is often international with little or no relevance of cultural contexts. For example the XML coding for database management software has similar coding architecture irrespective of it being developed in Canada, India or China. This characteristic has also led to the ease of moving IT as well as research and development tasks to the lowest cost locales. Knowledge work is dominated by the English language which is widely used in India with a large population who have been taught English from primary level. In addition English is the official language and the de facto language of business in India.

Work practices are yet to catch up with the promise of ICT and while there is a level of comfort in organizations about off-shoring of non-critical tasks, companies are wary of outsourcing or off shoring of tasks regarded as core competencies. Therefore while there is an agglomeration of skills offshore, in-house research and development and information technology activity spurs the demand for workers with these specialized skills in Canada. Businesses have expressed their interest in means for obviating the somewhat complex and time consuming process of permanent
residency and migration procedures in meeting their human resource needs. This leads to an increase in the demand for temporary knowledge workers.

According to Giddens, social action and interaction are embedded in time and space. Having identified the structural properties of the knowledge economy in Canada we also recognize that these conditions are "longue durée" and are in many ways beyond the control of individual agents as well formal institutions. These institutional characteristics have altered migration behavior in the context of the knowledge worker in two identifiable ways. These are a) the increased flow of temporary knowledge workers who then become migrants and b) the migration of semi finished human capital in the form of students in Canadian universities. Citizenship and Immigration Canada works to attract specialized temporary workers to Canada through programs for software development professionals and spouses of highly skilled workers. The chart below shows increasing trends in temporary worker and foreign students into Canada. The following section aims at explaining how the structural properties of the knowledge economy and labor market affect the individual's motivations for migration.

**Temporary Resident and Refugee Claimant Population by Primary Status, Annual Flows, 1978-2002**
3.1.6 Impact of knowledge economy and Canadian labor market on individual strategic behavior: The highly fluid skill requirements have given way to opportunistic, financially focused and mercenary like behavior among knowledge workers. Knowledge workers recognize that a skill with a high demand might become passé or even obsolete in a matter of few years. So while continuously upgrading their skill set knowledge workers seek to maximize the returns on their human capital during the window of opportunity presented. For example in the area of computer and gaming hardware, silicon chips have moved from 16 bit to 32 bit and now recently to 64 bit technology all in a span of a decade. This means silicon chip designers need to consistently upgrade their skill set and particular knowledge; experiences and skills are highly valued by employers at the top of the technology cycle when they are in most demand. Knowledge workers are also highly adaptable; their skills are readily transferable from one locale to another, their human capital better recognized. In addition many knowledge workers specially in IT might have
visited Canada on a contractual service oriented assignment. Therefore knowledge workers in India are well prepared to make the move to a new country should they be presented with better monetary prospects. Given the wage differentials between India and Canada, moving to Canada on a temporary work visa prior to migration helps achieve the desired goal. Said a recent migrant knowledge worker in IT:

“I have taken training and have completed several projects in COM technology, it is commonly used right now but it cannot really go on for long, related technologies are moving in different directions. I have to make most of the opportunity and make sure that I know the next technology before everyone else does. A friend of mine got trained in a tool used for financial services and now makes more than $100,000 in Toronto. I get paid 3 times as much in Canada than I did in India doing exactly the same work ...so there was no question about my migration. In fact now I am concerned if I get paid enough in Canada and would like to move to the United States once the economy there gets better, I think I can make more money there...my family will be able to adjust, we have been traveling to new countries on IT projects for 6 month periods earlier as well and we have had no problems in adjusting”.

The interviews indicated that knowledge worker migrants view career progression and financial benefits as the primary factors influencing the migration decision. However since these knowledge workers form a part of India’s middle class, the decision to migrate is based on the above factors is not always in black and white. According to an interviewee:
“Even though I realize that migration to Canada would enhance my opportunities, give me financial benefits and have a better quality of life... I was doing pretty well in India as compared to the rest of my family. I had a good secure job and led a comfortable life in India... So it was a very difficult decision for me to leave India behind... and faced a lot of opposition from my family and relatives. This is unlike earlier times when if someone moved to Canada or the US it would be a matter of pride for the whole family or even the neighborhood”.

The adaptability of Indian knowledge workers also means that they have variety of choices in migration destinations. Australia, USA, UK and several other countries have indicated that they would encourage such migration flows. As proposed by the theory of rational choice, the migrant evaluates these alternative destinations with respect to achieving goals. The interviews showed that all potential migrants analyzed pros and cons of all destinations. Said a recent migrant:

“While I came here for a better life, I was taking a longer term view. Job options and ease of move between jobs was important. I also considered migrating to the US and Australia and I searched for jobs out there through employment agencies. But I would not uproot my family from India if I was not sure that I would be getting a permanent residency within a few years and had some assurance that my family would be comfortable. Australia and the US can be troublesome to obtain permanent residency”.

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These myriad of options in migration destinations were not available in earlier generations. Globalization, wide spread emergence of the knowledge economy and use of technology as well as internationalization of credentials have made the Indian knowledge workers a well known commodity.

Using the temporary worker route is a risk mitigation strategy. Temporary knowledge workers view permanent residency as a risky endeavor. As a respondent put it:

“I cannot see myself coming to Canada without having negotiated a job from India itself. I had a well paying job in India but even then I could not support myself for too long in Canada if I had a long hunt for employment...I have seen on TV many shows about doctors from India coming and becoming taxi drivers and chartered accountants becoming clerical workers”.

Getting a job with temporary worker status diminishes some of the financial uncertainty surrounding the move to Canada making migration a more viable decision. Knowledge workers do not have the migrant networks possessed by the other class of migrants to give them the financial security, housing and employment options. The permanent migration process often involves leaving the safety and security of employment in India and starting afresh. With limited funds for subsistence and the discounting of human capital acquired in India, migrants often take employment far below the levels of prestige they were at in India. Instead given the international parity in knowledge work, the individual seeks employers directly to gain entry into Canada or temporary work permits
through inter-company transfers. Coming to Canada as a temporary resident gives much more control over the type and level of employment.

The emergence of the knowledge economy has increased the value of higher education in the Canadian labor market. This institutional characteristic has had a profound impact on the strategic behavior of migrant knowledge workers. As expressed by an interviewee:

"An advanced degree is a liability in India, recruiters and interviewers view an advanced degree as having put off entry into the job market until one gets a suitable opportunity, here an advanced degree with specialized skills is actually valued, there are jobs on campus which are open only to Masters and PhD students. Recruiters seek candidates with a specialized skill set and particular educational experiences".

As a result several migrants come to Canada on student visas to gain specialized skills which are most in demand in the labor market and affect the transition to knowledge jobs in their desired areas. However challenges remain. Several studies demonstrate that human capital acquired in India is not easily transferable to the Canadian labor market. Despite the efforts of the Citizenship and Immigration Canada (CIC) and Human Resources Development Canada (HRDC) considerable barriers exist to the recognition of the value that immigrants bring to Canada. In October 1999, CIC and HRDC funded a conference on "Shaping the Future -- Qualification Recognition in the 21st Century", the first national conference ever held to examine the recognition of foreign credentials and inter-provincial mobility (CIC Performance report for period ending March 2000). Giddens states that structure can be understood through normative elements or codes of significance of
rules and the localization of human capital has emerged as a significant rule of the
knowledge based labor market. As a result, many potential migrant knowledge
workers first enroll in universities in Canada as graduate students or get associate
degrees. Echoing these sentiments a graduate student at the university says:

"Without this degree, I would have to start at the very bottom. A
university degree from Canada gives some credibility to my
employment application; otherwise I would have been an unknown
factor. No one has heard of my previous employer or my university out
here (Canada)".

With the spread of the knowledge economy, there is an increased level of innovation
in Canada. This is an effect of the development of the knowledge economy and is
reproduced in the strategic behavior of individuals. Due to the momentum behind the
knowledge economy Canada has become an attractive destination for knowledge
workers in search for an intellectual challenge. Says a recent migrant:

"My area of work is Fluid Mechanics. In India I used to run mostly tests
– something a technician does out here. In Canada I would be intimately
involved with the research and product development right from the
conception stage which makes my job much more interesting and
challenging".

The migration decision can also be analyzed from the perspective of dialectic of
control. According to Giddens, the dialectic of control – relations of domination and
subordination are reciprocal and individuals are able to mobilize resources whereby
they carve out spaces of control and they maintain some autonomy on their destiny.
The employer is intimately involved in the temporary worker permit process and a job offer is a pre-requisite to qualify for a permit and therefore exerts considerable influence on the individual. However once in Canada, the worker starts the migration process to get permanent residency in a bid to gain control of their own status as well as achieve mobility in the labor market. The process of permanent residency has emerged as a competitive advantage for Canada in attracting migrants as this enables the migrant to gain control of where he would want to work and enable the migrant to change employers to maneuver into the most advantageous position. One of the key findings of the interview was that in Canada as compared to United States and Australia, it was easier for migrants to gain control of their own employment and the power of the employer was somewhat limited.

Giddens contends that regular and repeated individual action in accordance to structural rules and resources in social interaction have the effect of re-enforcing and reproducing migrant institutions. With the regularization of the social practice of migration of Indian knowledge workers, the temporary labor market imbalances of supply and demand have ceased to be the predominant driver of migration while at the same time wage differentials have also diminished. Instead, now it is the quality and broad expertise of this class of knowledge workers that has impressed the recruiters, multi-national corporations and other gatekeepers of international migrant employment. Migration of Indian knowledge workers has ceased to be driven primarily by cost factors and global shortages, but rather by the desire of recruiters to actively seek expertise from India.
Therefore in a bid for sustained development in knowledge economy, Canada needs to attract talented knowledge workers, the quality of these workers being equally important to the target numbers. Given the structural properties of the knowledge economy, individual motivations have manifested itself in two forms of migration behavior, using temporary work visas and temporary student permits as channels to migration. Canadian policy makers need to recognize and understand this behavior and the structural factors that re-enforce it in order to maximize the returns of its immigration program. Immigration policy tools are used by governments to ensure that migrants have the requisite skills to rectify imbalances in demand and supply in certain knowledge worker categories and strengthen the economy. The following section investigates the structural properties of the Canadian immigration regime and the impact its policy decision has on migrant behavior.

3.2 The Structure of the Canadian Immigration Regime

According to the World Bank’s world development report (1999/2000), the market for highly skilled workers will become even more globally integrated in the coming decades. Knowledge workers will cross borders freely, facilitating the circulation of technology, inducing the growth of technology-intensive industries, and helping to create a truly global marketplace of skills. Because development requires a highly skilled workforce, primary and secondary education will continue to be important. Countries unable or unwilling to create such a workforce, compete for skilled workers, and build a technology friendly environment will find themselves stuck on the lower rungs of the income ladder. All major immigrant receiving countries such as Canada, United States and Australia have policies that aim to control the skill distribution of migrants. Australia has a system similar to that of the Canadian point
system. Although the United States does not have a point system, employers try to attract skilled immigrants through special visas allocated to different industries.

3.2.1 Structural factors influencing development of Canadian Immigration Policy: From the beginning to today, nation-building has been a theme underlying Canadian immigration. Primary motivations for pursuing an immigration program in Canada has been to expand the population, boost the economy, and develop society (Reimers and Troper 1992) and these reasons remain true even today. Discussion of the impact of immigrants on the Canadian economy revolves around claims that immigrant aid economic growth by filling gaps in the occupational structure of the Canadian labor market (Green and Green, 1995). The CIC states that the primary purpose of the Canadian immigration program has been to boost the economy, while at the same time immigration also has humanitarian goals so that substantial numbers admitted based on refugee status and family reunification. However setting targets in terms of composition and levels of migration as well as control mechanisms to achieve these targets are primary drivers for immigration policy. Immigration policy over the years has come to reflect the changing objectives of the Canadian economy. In the 19th and early 20th centuries, agricultural development was a key to exploiting Canadian economic opportunities, so immigrants were recruited primarily to settle vast territories in the West. Economic migration today is centered on economic opportunities in the current knowledge economy (Reitz, 2002).

The primary government agency involved in regulating immigration, Citizenship and Immigration Canada (CIC) was established in 1994 to link immigration services with citizenship registration. The mission of the CIC as stated by the department is to
build a stronger Canada by deriving maximum benefit from the global movement of people; protecting refugees at home and abroad; supporting the settlement, adaptation and integration of newcomers; and managing access to Canada (Citizenship and Immigration Canada). The immigration policy of Canada sets out the institutional rules of migration in a variety of ways and points based selection policy has emerged as the cornerstone of Canadian immigration policy. The points based system was developed as a means to measure employability. Applicants were awarded points toward admission based on criteria such as education, occupational skills, and knowledge of one of the official languages, English or French. The underlying assumption is that immigrants who are successful in employment will make the most positive contribution to the Canadian economy and society. Such immigrants would pay more taxes, buy more goods, start more businesses, create more jobs, and use fewer social services. They would not take jobs from native-born workers, nor undercut their wages. A positive social, cultural and political impact is also expected. The most important structural determinant of Canadian immigration policy is therefore the Canadian economy, and its transition to the knowledge economy has been discussed in detail in the previous section. The points based selection gives a concrete form to immigration policy, providing an important and powerful control mechanism for migration flows and direct it towards occupations and skills believed to be in high demand (Green and Green, 1995). Canadian immigration policy influences the migration of knowledge workers through decisions aimed at controlling overall and specific migration flows.

3.2.2 Annual Targets: One of the primary levers of Canadian immigration policy is setting up annual targets. Immigrants to Canada are classified into four
different groups 1) those selected for their skills, the spouses and dependents of those selected for their skills 2) those entering in the business class (entrepreneurs, investors or self-employed) 3) those in Canada for family reunification, refugees (government-sponsored, privately sponsored or positively determined refugee claimants) and 4) those designated in the other category (for example, live-in caregivers) (Citizenship and Immigration Canada). Each year the Immigration Minister tables in the House of Commons annual target levels for each class of immigrant landings for the following calendar year. Target levels are largely based on the numbers of applications that are anticipated to be finalized in the following year, taking into consideration many factors including the absorption and settlement capacities of newcomers. Canadian government has taken steps to increase the migration of the economic class as compared to other classes.

3.2.3 Application processing lead time: The immigration targets are also influenced by the processing of applications, bottlenecks and inventory of applications. The inventory of application and processing speed has considerable influence on the attractiveness of Canada as a migration destination particularly in the context of the knowledge worker. Application processing times for Canada are reported to be reasonable and quite predictable – 80% of applications were processed to final disposition in a period of approximately 12-24 months. Those who wanted to migrate to Canada and were qualified could do so in a fairly reasonable time. However in certain locales during the five year period (1998 – 2002) the numbers of pending applications dramatically increased concurrently with application processing times: 700,000 pending applications (globally) in June 2002; processing delays in
Beijing 7-10 years; New Delhi 5 years, Hong Kong 4 years, Buffalo 2+ years (Singer, 2003).

3.2.4 Points based selection policy: Canadian national policy has undergone many revisions in the matters of immigrant volumes and characteristics. In the early 1960s the ethnocentric provisions were dropped and a points based approach was adopted which opened eligibility to suitably qualified individuals in terms of education, work skills, language abilities etc (Simmons and Keohane, 1992). The Canadian immigrant selection system has had a significant impact in raising immigrant’s skills which has been particularly important in increasing the migration of knowledge workers. Immigrants migrating to Canada in the 1950s, had educational levels which on average were well below those of the native-born population. By very marked contrast, immigrants arriving in the period after 1970 as a group possessed educational levels significantly higher than those of the general population (Reitz, 2001). Since 1995 the skilled worker category principal applicants as well as spouses and dependents have become the largest immigrant category (Citizenship and Immigration Canada).

The points system for selecting independent or economic immigrants, and the associated effort to maximize this category’s representation relative to the family class and other non-economic categories, have evolved into the principal policy tool for ensuring that the flow of immigrants meets the needs of the Canadian economy. Under points-based selection, applicants are awarded points based on criteria such as education, occupational skills, and knowledge of one of the official languages, English or French. By 1985, the required points for economic immigrants had
increased from 50 to 70 out of 100, with minimum requirements for job experience and occupation. Compared to the earlier version, the 1985 system increased the importance of occupational qualifications but reduced the importance of age and “personal suitability” requirements (Reitz, 2001).

3.2.5 IRPA: The new Immigration and Refugee Protection Act 2001 which replaced the previous Immigration Act of 1976, passed in November 2001 and in effect since June 28, 2002 was highly controversial. The new Act includes a number of provisions designed to facilitate economic roles for immigrants. It provides in Canada application for permanent residency including for temporary workers, spouses and partners, and for students with a permanent job offer who have been studying in Canada (Citizenship and Immigration Canada). This is intended to facilitate the new role planned for temporary workers in high-skill knowledge-economy jobs. The key feature of the new policy is to further upgrade skill selection for permanent immigrants, with greater emphasis on education and language knowledge than previously and less emphasis on specific occupational skills. A key consideration within the IRPA is that of adaptability of immigrant into the Canadian labor market. Accordingly, temporary residents and students are free to apply for migration after two years and are given additional points.

3.2.6 Pilot IT project and other incentives for temporary workers:
Facing pressure from industry, Citizenship and Immigration Canada (CIC) collaborated with Human Resources Development Canada (HRDC), Industry Canada and the Software Human Resource Council (SHRC) on the development of a pilot project to streamline the entry of those workers whose skills are in high demand in the software industry. Under the earlier procedures, a foreign worker who wishes to
work in Canada required an employment authorization from CIC and a validated job offer from a local HRDC office. If the HRDC office determined that the position could not be filled by Canadian citizens or permanent residents, the job offer to the foreign worker was validated and the worker could apply for an employment authorization.

3.2.7 Impact of Canadian Immigration Regime on individual motivations of migrants: Several structural factors condition the migration behavior of knowledge workers. The five years of processing delay is an eternity for knowledge workers. Given the fluidity of skill requirements, fast pace of career options and age of these applicants five years is unacceptable for processing the application and that is the time taken by the New Delhi processing office. In addition policy imperatives such as the pilot IT project have made it easier for certain classes of knowledge workers to easily get temporary work visas. Under the pilot project, the job-specific confirmation was replaced by a national confirmation letter, which stated that certain software positions could not filled by Canadian citizens or permanent residents. The national confirmation letter removed the delay associated with the job-specific confirmation process (Citizenship and Immigration Canada). To qualify for this expedited process, the job being offered must fit within a pre-defined list of job descriptions which includes Embedded Systems Software Designer, MIS Software Developer and Telecommunications Software Developer. These job descriptions also have salary ranges attached.
This has encouraged migration of temporary workers. Interviewees indicated, apart from taking five years to process the application, there is a lot of uncertainty about the outcome. A recent migrant expressed his concerns in the following terms:

“I am in my late 20s right now and migrating to Canada made a lot of sense for me. There are a lot of jobs for me out here. I have heard that if you apply in India it takes four to five years to get a decision. Besides that the paper work is much more cumbersome...Five years later migration might not make sense for me. There might not be any jobs for me. IT jobs depend upon IT spending by companies, which in turn depends upon economic conditions. Five years later the Canadian economy might be in bad shape, I might have a family and I think five years is too long ahead to plan”.

Given the on-the-job learning of certain knowledge workers, their credentials do not get recognition in the points based selection criterion and may not qualify for permanent residency. Therefore knowledge workers typically look for means to avoid the traditional application procedures. The Pilot IT project gives them an avenue to migrate in a timely manner and puts Canada in parity with country such as United States.

Due to the work experience requirements of the points based selection several young potential immigrants with undergraduate degrees do not qualify under the point based system. However as students they not only earn valuable points towards qualification for graduate university degrees but often work on research project getting valuable points for work experience as well as a skill set to enable a smooth transition to the job market. In a bid to enhance the attractiveness of Canada as a
location for higher education, processing times for student visa applications is greatly reduced through a fast track process. According to an interviewee:

"I had just completed my engineering and was not satisfied with my job in India. When I thought about migrating to Canada, I found that I would not qualify as I did not have sufficient points, coming to Canada as a graduate student has proven to be a good decision as I am not only gaining education from a prestigious institution, having spent two years here and obtained work experience as a researcher, I can now easily apply for permanent residency".

There is a tremendous amount of data and striking trends which support the hypothesis that Canadian immigration policy initiatives aimed at increasing economic migrants, increasing skill and education levels and creating a migration alternative for the temporary workers and students has increased migration of knowledge workers. A September 2003 study on "Immigrant Occupations: Recent Trends and Issues" published by the CIC states that the share of skilled worker principal applicants, and the size of the skilled workers category as a whole have continually increased since 1994. The percentage of selected skilled worker principal applicants (not including dependants) reached a 20-year high of 23% (52,000) of the total immigrant intake of 227,209 in 2000 which is a seven-year high. The study also records that one single occupational group dominated the landed immigrant cohort of 2000. Professional occupations in natural and applied sciences, which include engineers, computer professionals, and other technological and scientific occupations accounted for more than 13% (over 30,000) of all immigrants landed in that year while no other occupational group accounted for more than 2%. As a proportion of
immigrants intended for the labor market, this proportion rose to 26% of 2000 landings, with no other grouping exceeding 4%. Within the professional occupations in natural and applied sciences, engineers stand out as the dominant occupational grouping although significant numbers of immigrants also intended to work in the information technology sector.

Using Giddens’ structuration theory, migrant institution can be conceived as a set of social positions occupied by individuals which exert influence on their actions. The individual draws selectively on institutional rules and resources in pursued of their interest and inevitably reproduce the social system. With the successful migration experience of temporary workers and students, their high adaptability to the Canadian labor market and reduced integration problems due to knowledge of the social context, Canadian immigration policy has launched special initiatives to enable these migration flows. Accordingly IRPA places a lot of importance on the adaptability of the immigrant into the Canadian labor market. Temporary residents and students are free to apply for migration after two years and are given additional points. This is an illustration how individual behavior of migrant knowledge workers has recursively impacted the structure of Canadian immigration policy.

The migration of Semi-Finished human capital in the form of students is also heavily impacted by an educational institution. The following section discusses the impact of education on migrant behavior.
3.3 Educational Institutions, knowledge resources and training systems

3.3.1 Internationalization of education: An important aspect of international migration which can be viewed in structuration terms is the internationalization of education. This is the impact of recognition by nations that “knowledge resources and training systems” can be a source for highly valuable export earnings (the value of educational exports is estimated at $11.7 billion in the United States in 1998 (Iredale, 2001)). In addition employers and recruiters value western qualifications as it ensures that their skills are easily “recognizable”, other language competencies are gained and there is an increased awareness of “political, economic and social context of the host nation” (Iredale, 2001). As a consequence, skilled migrants to Canada tend to be students in graduate schools and other tertiary institutions. This is often referred to as the immigration of “semi-finished human capital” (Khadria, 2001).

3.3.2 Educational Institutions and training resources in Canada:

Canadian universities also recognize the importance of international students. The Association of Universities and Colleges of Canada, an organization representing 93 Canadian public and private non-profit universities, states that international students bring significant economic benefits. As per its 1996 estimate, international students contributed $2.7 B to the Canadian economy which is equivalent to 27,000 jobs (AUCC, 2001). However there seems to be a policy disconnect in the internationalization of Canada’s Education. Most of the initiatives are aimed at highlighting the economic returns from international students through educational spending as against the economic impact of international student through
development of a well adjusted, adaptable, highly skilled addition to Canada's labor market. Most of the interviewees indicated that financial assistance, scholarships or other forms of remuneration were critical in both their choice of university as well as location.

The AUCC asserts that Canada is losing out in the recruitment of international students to countries with a more cohesive recruitment strategy for international students and therefore lobbies for the implementation of favorable immigration laws which allow students to come to Canada with "dual intent", i.e. planning to temporarily study in Canada in the short term but also considering staying in Canada in the long term. All migrants who fall under the category of semi-finished human capital have alternate locales and therefore establishing the attractiveness of Canada is critical in maintaining the quality of knowledge workers. The mobility and availability of choices for migrant semi-finished capital has increased dramatically and these migrants are explicitly making rational choices with a focus on destinations. For example, the United States and Australia have a system to enable a smoother transition from student status to temporary worker status and are much more attractive as a location for students with intent to migrate.

3.3.3 Educational Institutions and training resources in India:
Educational institutions have also morphed at the other spectrum of migration. In recognition of the need for specialized training to cater to the labor market in the knowledge economy, individuals and institutions in India have made timely and effective investments focused on information technology training institutions such as NIIT and Aptech that impart training on specific technologies that fill voids in the
global labor market. University training in this field is often considered to be overly academic, lacking a practical orientation and too inflexible to meet market demands. Speaking from a database management perspective, while universities impart knowledge on the architecture of XML language and possible applications, they might not focus on skill development in coding in specific real life situations. Investment in infrastructure and training resources in India further emphasize the agglomeration of these skills. The locales of these interactions are also significant with Hyderabad, Bangalore and some other major metros serving as centers of accumulation of allocative resources of IT training and experience. Government support has resulted in setting up of various research and technology parks. As evinced from the above discussion, universities and other centers of knowledge resources and training serve as important institutions in the structuration of migration of knowledge workers.

3.3.4 Development of a migrant network of students: Having gained a preponderance of numbers migrant Indian students have formed a migrant network which carries out critical functions of any migrant network. This migrant network has also had considerable influence on the priorities and frames of reference for students in Indian colleges and universities. Academic success and excellence in Indian schools is often measured by a scholarship to study abroad, and is given more importance than finding highly competitive employment. According to data published by the CIC, Indian students are now only second to Chinese students in number, however unlike their Chinese counterparts, these Indian students are straight out of school and have spent little if any time in the Indian workplace.
3.3.5 Impact of educational institutions on individual migrant behavior: Given the challenges in recognizing Indian credentials and the preference of Canadian recruiters for western or Canadian qualifications, there is a marked trend towards migration of semi-finished human capital in the form of foreign students in Canadian Universities. Since the points based selection of permanent residency makes work experience almost mandatory, most of these young potential migrants do not qualify for that route. Furthermore steps have been taken by the Canadian government to make it more attractive as a place to study which has resulted in student visas becoming significantly easier to obtain than permanent residence.

Many Indian students with their first engineering degree in institutions of excellence such as the Indian Institute of Technology (IITs) and Regional Engineering Colleges (REC) migrate annually to graduate institutions in Canada and they have emerged as the locales for migration of students. The interview data reveal that many of these students expressly enter into these institutions with the intentions of using it as a conduit to achieving migrant status, so much so that there is considerable peer pressure fully one hundred percent of the interviewees had considered an international education or graduate studies while in schools in India. As one respondent, a former student at a prominent South Indian Regional Engineering College said:

“Almost all the students in my college were considering giving the GRE, TOEFL and all the initial steps for an education abroad, in fact you felt left out if you did not also make similar preparation and plans. Rankings published by the U.S. News and MacLeans were less important than

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colleges which popular or top students selected. You apply to schools where your friends were studying and had told you that they were having fun and had good prospects after graduation”.

Internationalization of education along with the migration of semi-finished human capital in the knowledge economy has resulted in a migrant network amongst the community of migrant students, which takes precedence over the traditional notions of migrant networks of family, kinship and locales. This migrant network, closely centered around educational institutions, spans both students and faculty. Seventy of the interview respondents had no family ties to Saskatchewan and fifty of the interview respondents had no family ties in Canada altogether.

Canadian universities, unlike their counterparts in India, use a process of admission which considers both tested scores such as the GRE or SAT and some more intangible aspects such as career focus, characteristics of the applicants, specific areas of interests and academic goals. These are measured through essays and letters of recommendations. Through the interviews it became apparent that knowledge of admission procedures and feedback on the universities were critical inputs which are supported by this migrant network. In India admission procedures are based on nationwide competitive examinations. About 45% of interview respondents indicated that they used friends and other formal networks to get information about application procedures and visa procedures, as well as universities or specializations to focus in to have a better likelihood of getting financial aid. As one of the respondents said:
“I used the internet to research on schools but recommendations from my friends probably had the biggest influence in my decision regarding schools. I came to the University of Saskatchewan because many of my friends who study here and I sent e-mails recommending it...because over the internet every University seemed to be the same, said they had excellent staff, had a great campus and so on...I had no way to make up my mind on which school to attend”.

In addition, this network of migrant students also facilitates the more traditional roles of migrant networks of risk reduction and ease of settlement upon landing of the migrant. This help in settlement in the case of students is especially important given they are much younger than other migrant classes. Most interviewees stated that they received a lot of assistance from formal campus organizations such as the Indian Student Association in the University of Saskatchewan, but also that interactions with members of this institution prior to their arrival in Canada helped in making the decision easier. A graduate student recalls her arrival in Canada:

“I was just familiar with the University of Saskatchewan because some of my friends and seniors had applied to this University. I remember being very excited about the trip to Canada but when the day for my flight to Canada started drawing near I was highly anxious. Besides my adviser with whom I had exchanged several e-mails I knew no one here. I started contacting students with Indian names from my department website and came across the Indian Student Association, they were very helpful and I got a lot of information from them, starting from clothes and winter garments I should bring because I was petrified of the frigid
Canadian winters, to information about utensils such as pressure cooker and spices to cook Indian meals. The ISA helped me find a place to live and filled up the paperwork and paid the security deposit for the lease and also arranged for a member to pick me up from the airport. I felt that I had a group of friends even before I landed in Saskatoon”.

The interviewees also indicated that once in Canada they have been active members of formal organizations such as the ISA, setting up incoming Indian students with temporary residence in their house or apartment for the initial settling period, helping out with rides to make purchases and buy groceries and giving advice and mentorship. There is also an informal community of migrant students, close friendships are developed here and form the bulk of social interaction for most of the migrant students. Said a current student,

“Most of my friends are Indian, I rent and watch hindi movies with them, cook food and hang out together and do most of the same things I did in my college in India”.

Canadian policy is geared to make Canada an attractive destination for students from India but they are outdone by countries such as United States and Australia. All the interviewees indicated that if they had got admission into institutes of comparable repute in the United States or Australia, they would have chosen those destinations over Canada. Says a current student at the University of Saskatchewan:

“Canadian universities are a second choice or a safe bet, people generally want to go with schools in the United States…it is not the weather, the schools in the US are better known in campuses in India
and I am not talking about MIT or CalTech, we hear about more success stories of graduates who have gone on to start companies. The reason I am here in the U of S is that I did not get admission in the US”.

These lacunae in Canadian immigration policy can prove costly to Canada since it has a direct impact of the quality of migrant knowledge workers drawn to Canada and their ability to contribute to the level of innovation within the knowledge economy. Through the interviews it was identified that potential migrants consider visits by consortium of universities, organized by the local consulate as an important source of information about higher education in Canada. While many attended such organized events from universities in the United States and Australia, Canadian universities have not done a good job of reaching out to potential international applicants to attract top students. Many students who did not have an established migrant network feedback loop for information on education in Canada often had to rely solely on the internet and did not feel comfortable making such an important decision based on information sources they thought lacked credibility. The results of this analysis provide direction as to steps which can be taken to enhance the image of Canadian universities in the minds of Indian students with an inclination to migrate.

The sedimentation of the practice of migration of semi-finished human capital has contributed to the “Globalization of Human Capital” (Khadria, 2001) and recognition in Canada of institutions such as the Indian Institute of Technology and other institutions of excellence as a source for “unfinished human capital” from India. This greater recognition has also resulted in an increased transference of human capital from India in an educational milieu as against the labor market where human capital
is discounted considerably. This has further encouraged migration of semi-finished human capital and students.

While educational institutions play an important role in the migration of semi-finished human capital, migration of temporary workers is influenced by a complex institution of gate keepers, recruiting agents, and sources of information. The characteristics of this institution are discussed in the next section.

3.4 Recruiting agencies and other Brokers of Information

Private recruitment agencies are organizational entities that depend upon access to specific bundles of allocative and authoritative resources and, most importantly, control over information that allows them to negotiate the modalities of interaction within the migrant institution (Goss and Lindquist, 1995). These recruitment agencies have had an important role to facilitate migration of Indian knowledge workers, in particular IT professionals. Agencies must have sufficient capital to set up their establishments and sustain contract-seeking and labor-recruiting operations. They must obtain official authorization from state agencies and navigate the law and language of legal institutions that regulate recruiting activity. They also have good knowledge of the practices of international employers and the regulations of national and foreign governments.

Recruitment agencies, when acting as agents of overseas employers, also act as private gatekeepers within the migrant institution, in turn managing the modalities that condition access for individuals seeking overseas employment. Representatives of recruitment agencies exercise considerable discretionary powers since qualified
applicants will usually be only a small portion of many in a pool and selection often depends upon maintaining interaction with these agents. These individuals are critical to the functioning of the migrant institution – they exploit the institution for their individual benefits but in so doing play roles as institutional agents by enforcing rules and distributing its resources. Agents closely follow market trends and technology developments. Big agents combine training and placement to ensure that trained workers meet potential demands. Rather than being mere middlemen, agents creatively match business needs and labor supply. By establishing worldwide labor databases and connections with labor sources, agents can address clients’ labor requirements very effectively. Successful return migrant workers often possess valuable practical knowledge of procedures and contacts with institutional agents from their own personal encounters that they may exploit to facilitate migration of others. In this process, of course, they themselves become agents of the institution and help to reproduce the modalities that structure its operations. The success of the return workers acts as a powerful example for others and provides resources upon which they can draw to establish themselves as agents. With programs such as the Pilot IT programs for temporary workers, these institutions are gaining importance within Canada as businesses seek to recruit individuals with a specific skill set.

3.4.1 Recruitment agencies in migration of IT professionals: The migration of Indian knowledge workers provides a good case study to examine the impact of recruitment agencies in international migration. “Body shopping” is the practice whereby a firm recruits IT workers and then farms them out to clients for a particular project, though the firm itself is not involved in the project. The key players in “body shopping” are a series of recruitment agents. They form “agent
chains” where they depend on each other and assume different functions in dealing with the market, the state and the workers. “Agent chains” mean that repeat placement becomes a common phenomenon. The worker is sponsored by the first (small) agent but this agent does not contact or even know anything about the real employer. The employer signs a contract with the last agent only and sends the worker’s salary to the last agent. Workers receive their salaries only after all margins have been subtracted by agents along the placement chain (Xiang, 2001).

There are three levels of agents and each operates in particular ways. The “agents chains” and “body shopping” schemes create a labor reserve which stabilizes the price of labor. Big agents are defined as those who place more than 50 workers in a single year. Another problem is to match workers and jobs quickly. Placement agents are not supposed to sponsor a worker until a job offer is finalized. Thus a time lag between demand and supply still exists. When one project is finished, the placement agent has to find another job for the worker but it is difficult to find a new “opening”, meaning a job offer from a client. Due to these difficulties, big agents need smaller agents as their secondary vendors. Middle-sized placement agents are defined as those who recruit 15-50 workers a year and manage a stable number of workers through the year (rather than on an ad hoc basis). Most of the middle-sized agents involved with Indians are run by Indians. Middle-sized companies are plagued by the cumbersome bureaucracy of labor recruitment, which is one of the biggest obstacles in business. This difficulty means that “middle agents” need to find another mechanism for guaranteeing a ready supply of IT workers. The emergence of “body shops” has provided this mechanism. Characteristic of these “body shops” is their “bench model” operation, which means sponsoring a worker without any job offer
from clients and putting the worker “on the bench” after he/she arrives. Small agents then place these workers through bigger agents. Despite these difficulties, “body shops” have a strong advantage in recruiting workers.

3.4.2 Visa and educational consultants: Through interviews it was noted that migration of semi-finished human capital is also heavily influenced by Visa consultants and education consultants. The process of application for admission to obtaining a student visa can be daunting for these young migrants and these consultants play the role of an information source and have considerable influence on the migration decision and choice of locale. Many of these organizations also have legal departments which include immigration lawyers who advise applicants regarding application procedures and immigrant selection procedures. The CIC does not formally recognize these organizations.

3.4.3 Impact on individual motivations: The migrant knowledge worker is looking for risk mitigation strategies in both knowledge workers and students. Information brokers, recruiting agent etc play an important role in the migration decision as they act as enablers for the individual. Though individuals regard these institutions as an integral part of the migration decision as well as decision on locales, Canadian immigration policy is wary of controlling or even recognizing these institutions given the chances of abuse of power and misrepresentation.

3.5 Conclusion of Structuration Analysis

In this chapter we have identified the migrant institutions and their influence on individual behavior. The emergence of the knowledge economy in Canada has
created a pronounced gap in demand and supply for knowledge workers. Institutional characteristics of the knowledge economy inhibit the correction of the demand gap in the Canadian labor market. At the same time there has been considerable regional agglomeration of knowledge skills in India. This has led to two specific migration flows, that of temporary knowledge workers and that of semi-finished human capital. These knowledge workers have skills which are in very high demand in the global labor market; they are savvy about their value as well as opportunities presented in various countries. Should conditions for migration be unfavorable in Canada, this class of migrants will choose to go the United States or Australia. Canadian immigration policy plays a key role in attracting migrants. While the points based selection criteria gives a structured methodology for evaluating applications, it has its drawbacks in being unable to attract semi-finished human capital - an adaptable and recognized sector of the Canadian labor market. Long application processing lead times also contribute in making Canada unfavorable in the eyes of migrant knowledge workers. There is a need for policy revision in these two areas. Educational institutions and a network of recruiting agents and information brokers complete the complex institutional structure of migration in this context. The following chapter presents conclusions of this analysis in more detail and outlines policy imperatives as well as directions for new research.
Chapter 4: Conclusion

With the emergence of the knowledge economy and concomitant changes in the areas of technology and globalization of economy and labor market, the migration of knowledge workers and particularly Indian knowledge workers has received a lot of attention. The contributions of this class of migrants in the development of the knowledge economy, bridging shortages in the labor market for knowledge workers as well fueling innovation in the areas of engineering and information technology are very well documented. Canada has also realized significant benefits through the migration of skilled workers. The results of this study contribute to the understanding of this migration flow, develop an understanding the variables and drivers of their decision to migrate by treating the migrant as knowledgeable and capable human beings, as well as identify relationships between their individual decisions and the structure of the institutions influencing migration.

There is considerable discussion regarding the validity and completeness of contemporary migration theories. Conventional theories are dichotomous and can be partitioned into functionalist and structuralist theories. Both of these sets of theories have their drawbacks; the analysis in these theories is made either to the exclusion of micro-level decision making or the exclusion of social structure in which the migration decision is made. A discussion regarding the superiority of one class of theories over the other is an exercise in futility, since they both have their areas or context where they are most applicable. However, Giddens has opened up the possibility for the migration researcher to overcome the strictures of either seeing migrants as independent actors or as puppets whose actions are totally dependent on
structural mechanisms. The analysis presented in the thesis shows the advantages of the use of structuration theory in international migration and extends on the claims made by Goss and Lindquist on the validity of use of structuration theory for multi level analysis in the area of international migration. The use of structuration theory in migration studies has many advantages which result in a more complete analysis. By explicitly recognizing the duality of structure and agency we can gain insight into 1) what are the structural factors which influence migrant behavior 2) Influence of these structural factors on individual strategic behavior 3) How policy decisions can be implemented to alter structural factors so that you get the desired strategic behavior from individuals. To illustrate this let us consider the use of rational choice theory in migration. Application of rational choice theory for example would also reveal that migrant knowledge workers consider permanent migration to be risky and seek temporary migration routes as a risk mitigation strategy. Rational choice would also clearly illustrate an account of this strategic behavior. However the theory would be deficient in completely identifying the structures which lead to this strategic behavior. Structuration theory on the other hand studies strategic behavior and structural factors in conjunction, and reveals for example that the Canadian labor market is deficient in the transference of human capital which is what makes the migration decision risky from an assimilation perspective. Therefore structuration theory promotes a more complete understanding of the migration decision and is more valuable in tailoring policy decisions.

At the outset we can recognize two basic differences in the current class of migrant knowledge workers from India and the traditional migrant. One of the unique characteristics is “choice of migration destinations”. The knowledge economy and
widespread need of knowledge workers, and several countries view this as a resource as a competitive necessity in the knowledge economy. Over 15 countries have indicated that they would welcome knowledge workers in the area of information technology and have put in place fast-track procedures to enable this. In addition, this class of knowledge workers is not faced with significant “push factors” of earlier knowledge worker migrants. They are not persecuted or threatened in their countries of origination, rather they are well paid compared to their peers and have a lot of opportunities for career progression in India. Therefore this class of migrants fits well with Giddens’s conception of knowledgeable and capable agents engaging in rational critical thought conditioned by wider social structures and migrant institutions. They employ their knowledge of rules and exploit resources to successfully migrate and one of the most important variables in their migration decision is the choice of migration destination. Therefore a country such as Canada has to establish its attractiveness as a migration destination in order to enable this migration flow. The other major difference is the temporary nature of many of these migration movements, prompting researchers in the field to often supplant the term “migration” by the term “movement”. This thesis demonstrates how migrant institutions such as the knowledge economy have led to the temporary nature of migration. As a result of the migrant institutions and the impact it has on the individual, we see trends emphasizing two types of migration flows, the migration of temporary knowledge workers and the migration of semi-finished human capital. The following charts summarize the key differences in the traditional migrant knowledge workers and current knowledge workers.
Traditional Migration model of knowledge workers

**Edu. Inst**
- Encouraged migration to facilitate knowledge exchange
- Migrants were faculty/research fellows interested in academia

**Labor Market**
- Little asymmetry in demand and supply
- Migrant knowledge workers across all professions

**India**
- Lack of career opportunities
- Uniform mix in professions of migrants
- Limited recognition for special skills of Indian workforce

**Economy**
- Localized and not global
- Knowledge economy in budding phase
- Internet and communication technologies not fully developed

**Immig. Policy**
- Some professions given slight preference
- Favored migration from Europe
- Policy geared towards population growth and agricultural settlement

**Migration Decision**
- Permanent movement
- Driven by lack of opportunity in India
- Destination determined by where it is easiest to migrate
- Limited choice of destinations
The knowledge economy has had tremendous impact on the global labor market. The obvious and apparent macro level impact is the dramatic growth in demand for highly skilled knowledge workers particularly in the area of Information and Communication Technologies which has influenced the socio-economic policies of a country to encourage migration. At a deeper level, the knowledge economy has transformed the labor market for knowledge work to become truly global, with a standardized set of skills across all regions of the world unfettered by unions and professional organizations. Knowledge workers are highly adaptable and their skills
readily transferable to any region of the world. Add to this the fluidity of skills in the
knowledge economy where technologies and skills get rapidly displaced by another.
The impact of these structural factors on individual strategic behavior has been
profound. The migrant knowledge worker is now beset with a gamut of choices in
migration destinations, has developed a short-term mercenary like pattern of
behavior to maximize returns on shortages of a particular skill and migration
decision and therefore is more prone to explicitly analyzing the benefits of the
decision to migrate.

The policy implication of this structuration is significant. Canada has to firmly
establish itself as a foremost destination for migrant knowledge workers and market
its attractiveness, with its safe multi-ethnic urban regions, quality of life and strong
and stable economy. This is essential in obtaining the desired migrant stocks and
flows, but also in securing the highest quality and most desirable migrant knowledge
workers. The results of the study show that migrants view financial and career
related benefits to be the most significant for their migration decision. The potential
migrants and even migrants currently residing in Canada view the United States as a
more attractive destination. Some even view Canada as a gateway to the United
States, and this leads us to believe that more focus should be given to establishing the
attractiveness of Canada. Canada should not simply rely on the word of mouth
dispersion of migrant success in Canada, or rely on broad government
pronouncements welcoming migrants. There is a small window of opportunity here
and Canada needs to be more proactive and focus on dissemination of information at
the micro level. This can be accomplished through the means of seminars in
partnership with associations such as NASSCOM, discussions and panels with industry leaders from Canada and the involvement of television and other media.

Policy decisions for immigrant selection, procedures for migration as well as policies aimed at migrant settlement have emerged in the forefront of establishing attractiveness of Canada. The Canadian immigration regime is viewed as rules of the migrant institution that must be understood in order to successfully migrate. There are several pros and cons of the current points based selection methodology, and though the merits and demerits can be argued, there are several key finding this research provides which can be used to refine or recreate immigrant selection policy.

Potential knowledge worker migrants view the permanent migration route as too risky and view the temporary worker route as a risk mitigation strategy. One of the key hindrances to migration is the transfer of human capital. Migrant knowledge workers do not have the migrant networks and support structure other classes of migrants have. They are wary of the reception they will receive in Canada and are skeptical of whether their qualifications and skills will be readily recognized. Despite the efforts of the Citizenship and Immigration Canada (CIC) and Human Resources Development Canada (HRDC) considerable barriers exist to the recognition of the value that immigrants bring to Canada and steps have to be taken to rectify this. While this problem is not restricted to Canada, Canada can take the lead and thereby establish an edge over other migration destinations by establishing means for recognizing qualifications. Through partnership with industry, there should be developed a means of recognizing centers of engineering and knowledge excellence in India. By developing a list of such institutions and communicating it within industry as well as the CIC, Canada could develop a cohesive policy of recruitment of talented individuals by industry and expedite processing of such applications. This
should promote direct recruitment by Canadian industry and the emphasis can be transferred from permanent migrants in the economic class to temporary migrants who transform into permanent residents in the course of time.

At a more procedural level, there has to be a wider deployment of fast track policies for processing immigration applications. Many interviewers indicated that the long processing times spurned several potential migrants who decided to stay in India or migrate elsewhere due to the economic uncertainty surrounding the processing time horizon. Processing times have been used as a means to balance supply and demand with regards to migration stocks and flows but this method breaks down when it comes to migration of knowledge workers. While some progress has been made in this direction with the Pilot IT project, there is a lot to be desired. This is why a robust scheme for recognizing skills is required so that it can be deployed into immigration selection procedures so that processing times no longer are a factor in migration decision making especially within this highly desirable migration flows.

One of the important contributions of this thesis is the structuration of migration of semi-finished human capital in the Canadian knowledge economy. In contemporary research this is seen primarily as a result of the increased emphasis on knowledge and education in the Canadian economy. This thesis shows that it is also due to serious deficiencies in the mechanisms for transference of human capital as well as peculiarities of the Canadian immigrant selection procedures. Several young potential migrants do not qualify due to certain restrictions regarding the work experience in the current points based selection. The migration of semi-finished human capital in the form of graduate and undergraduate students as well as research
fellows in the numerous institutions of higher learning has surfaced as an important source of migrant knowledge workers for the Canadian economy. These migrants have additional advantages of being well adjusted with an awareness of political, economic and social context with highly recognizable skills. Currently there is a misalignment in Canadian policy regarding student migration. It is centered around the contribution to export earnings and it largely ignores the important contributions made by these students to the labor market. There is a need to set in place policies to explicitly recognize dual intent from student migrants, allowing them to gain entry into the country to both study as well as gain permanent residence.

The routinization of the migration of semi finished human capital from India has led to the development of a migrant network of students centered around universities and campuses in Canada and encompasses both students and faculty. This migrant network facilitates the role of the traditional migrant networks of risk reduction and support upon landing, but has also facilitated other tasks such as feeding information to their counterparts in India, help with admission procedures and choice of universities and fields of study. The extent of this influence is under-rated. The migrant network of students who has made higher studies in Canada not only acceptable in campuses in India, but there is considerable peer pressure to the effect that a job in India is now looked down upon. Migrant network of students have emerged as the focal point of social life and interactions within the Indian student community and often finds representation in the form of formal organizations such as the Indian student association. Canadian policy needs to explicitly recognize the value these students provide because Canada is being outdone by countries such as
the United States and Australia in engaging in the migration of semi-finished human capital.

This thesis therefore provides us with a means to link the rules and resources of migrant institutions with individual strategic behavior and obtain a multi-level understanding of the richness and intricacies of the migration decision through the use of structuration theory. The structure of the migrant institution has resulted in two specific migration flows, the migration of temporary workers as well as migration of semi-finished human capital. This research provides us with a means to map the individual motivations to enable us to tailor policies to attract migrant knowledge workers from India.
End notes:

1 A glaring illustration of such careless conduct by a corporation is the Bhopal gas tragedy whence thousands were killed in the Indian city of Bhopal due to poisonous methyl isocyanate (MIC) gas from the non-operational factory of the Indian subsidiary of Union Carbide Corporation, an American company manufacturing pesticides (Everest, 1986). The city is yet to recover from the ill effects of the gas leak with new problems cropping up frequently.

2 Hechter and Kanazawa (1997) argue that an individual typically will find his or her actions checked from birth to death by familial and school rules; laws and ordinances; firm policies; churches, synagogues and mosques; and hospitals and funeral parlors.

3 An apt example of this is the fact that most traditional Hindu societies in India condemned leaving the shores of the country and often people traveling abroad would have to undergo penance to be accepted back in their societies. Since the second half of the twentieth century, this mindset has totally transformed and traveling abroad is a common occurrence among the educated and the skilled sectors of the Indian society. Foreign destinations, as holiday spots, are also quite sought after.

4 Deepawali, a major Indian festival, is a public holiday in Singapore and celebrated widely in that country.
Dirty Protest: In the late 1970s in their effort to secure a return of special category status Republican paramilitary prisoners in the Maze Prison, outside Belfast, refused to wear prison clothes. As civilian clothes were not allowed under the new rules the Republican prisoners wrapped blankets around themselves - so started the 'Blanket Protest'. The protest escalated into a 'Dirty Protest' in which prisoners refused to wash, refused to shave or cut their hair, and refused to use the toilets and instead began to smear their own excrement on the walls of their cells. The 'Dirty Protest' later gave way to a series of hunger strikes.

Source: http://cain.ulst.ac.uk/othelem/glossary.htm#D
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Appendix A

Questionnaire

I. Demographic information and status

1. Name:

2. Age:

3. Sex: Male □ / Female □

4. Place of birth:

5. Marital Status:
   □ Married
   □ Unmarried
   □ Divorced
   □ Common law

6. Children: Yes □ / No □

7. If yes, number of children:

8. What describes your status the best?
   □ Permanent resident / Citizen of Canada
   □ Temporary resident

9. If Permanent resident, what best describes your transition to permanent residence:
   □ Did you arrive in Canada under different visa category and then became Permanent resident? If so which visa category?
   □ Did you arrive in Canada after obtaining your permanent residence from India? If so, which class of migration – Economic, Family etc?

10. If temporary what class of visa?

11. If temporary, which statement describes you best?
You have applied for permanent residency and your application is currently being processed

You have considered applying for permanent residency or are in the process of applying

You have given significant consideration to applying for permanent residency but have not applied

You have not considered applying for permanent residency

II. Education

1. Highest Educational qualification:
   - Secondary (Class 10)
   - Post-secondary (Class 12)
   - Under graduation (BA/Bsc/Btech/BE)
   - Masters (MA/MTech/ Msc/ ME)
   - Phd

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<th>Degree name</th>
<th>Institution</th>
<th>Location – (city, country)</th>
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III. Choice, decision factors etc

1. What would you say are the most important factors for you to decide to study in Canada (name at least three)?

2. Where did you first hear about studying in Canada?

3. Did you consider studies in any other countries such as the US, Australia etc. – If so which ones? Why did you choose Canada over these countries?
4. Did you consider getting your graduate/ undergraduate degree from India – why/why not?

5. Were you admitted in other schools in Canada? If so what are the factors you considered in choosing the school?
6. Did availability of financial aid play a role in your choice of destination? Would you have come to Canada to study if you had not received any financial aid?

7. Do you feel that you have any advantages over students from other nationalities in the university?

8. Did you face any problem with the education system in Canada?

IV. Links between locales

9. Do many students from your undergraduate institution come to study in Canada or other countries?

10. Do many students from your home town or location of undergraduate institution/ high school come to Canada to study?

11. Did Professors or other faculty from your undergraduate institution in India visit Canada for seminars, research meetings etc.?

12. As a student in India, did you hear about Canada as a destination for higher learning?

V. Migration decision

1. What were your employment plans upon graduation before you came to Canada? Were you planning to seek employment in Canada after completion of your studies or were you planning to return to India? Has this decision changed during the course of your studies - why/ why not?

2. Are you considering applying for permanent residency in Canada? If so did you consider applying prior to your arrival to Canada or upon arrival to Canada?

3. If you were planning to seek employment in Canada, did you consider applying for permanent residency or employment from India itself?

4. If you have applied for permanent residency, would you have still qualified under the points system if you had applied without your current credentials?
5. Are you an active member of any student organizations? Are you an active member of the Indian Student association?

6. Did you face any problem with your student visa? Was it difficult to obtain?

**VI. Kinship**

1. Are there any members or your family who came to Canada to study?

2. Did you get any financial support from them? Yes □/No □

3. Still do you get support them or only initially you got?

4. Was it a big factor in your choice of destination, family living here?

5. Did they encourage you or help you when you were coming here?

**VII. Sources of information, brokers,**

1. Did you contact anyone from your undergraduate institution for recommendations or information about which school to study? Yes □/No □

2. Did you take any training/tutoring for standardized tests such as TOEFL or GRE in India? If so with whom?

3. What were the most important sources of information for your decision to come to Canada to study?

4. Did you seek additional information or advice about preparing your application for admission to Canadian Universities? If so, from whom?

5. Did you contact any educational consultants, visa advisers or any other similar agents prior to coming to Canada for studies? If so whom? Can you describe your experience?