INFORMATION TECHNOLOGY AND THE RELATED SERVICES INDUSTRY: EVALUATING INDIA’S SUCCESS FACTORS

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Abstract. At present, India is the world leader in the global outsourcing services market with 28% of the market share. In this article, I explore India’s journey to the position of prominence in the IT and related services market, and discuss both the collaborative efforts and individual efforts of government, private sector firms and independent trade body, NASSCOM, in the development of this industry. The competition is fierce in the global outsourcing services market so for India to maintain its leadership position, the Indian government and IT firms need to work in tandem with one another. The Indian government needs to provide efficient solutions to the problems related to infrastructure and higher education, and private firms need to adopt innovative strategies and effectively use their experience to maintain India’s leadership position in the global market.

Keywords: Business policy, government policy, India, international trade, IT services, NASSCOM, offshoring, outsourcing, public-private partnerships.

1. INTRODUCTION

By 2010, India’s offshore industry could potentially generate US$60 billion in export revenues, account for 8% of the GDP, pay for a massive infrastructure build-out, and sustain around 10 million jobs [29]. India is currently the world leader in the global outsourcing services market, with a dominant share of 28% of the market. According to the 2003 Goldman Sachs’ study of the Brazil, Russia, India and China (BRIC) economies, India has one of the highest potentials for growth and will be the third largest economy, right behind U.S and China, by the year 2050 [37]. Figure 1 details the sector-wise breakdown of Indian IT exports over a five-year period, indicating the extent of the growth that has been occurring. It is estimated that by the end of 2008, the total revenues from IT exports will reach US$40.3 billion.

As a researcher interested in developing a new theoretical perspective for understanding the underlying phenomena that led to the growth and development of IT and related services in India, I will use the theoretical lens of public-private partnerships [33,34,35] to explain the interaction among the government of India, the private sector and NASSCOM (an independent trade body). Toward this end, I will focus on several research questions: What has been the role of Indian government in the promotion and development of IT and related services sector? What roles have private sector firms and NASSCOM played and what is their contribution in the development of IT and related services sector? What does India need to do, to maintain its position as a leader in the market and what are the challenges India faces? I evaluate these issues using the hermeneutic approach to qualitative analysis [20].

The growth of the IT industry in India is an interesting story. The trigger that set India on its path to exponential growth was the IT outsourcing boom. This boom provided the initial thrust needed to carry India forward and establish its brand name in the global market.

Figure 1. Indian IT Exports, 2004-2008

Note: Source of the data is NASSCOM [28]

A look at the history of outsourcing in India tells us that two of the major milestones that led to the growth of outsourcing were the policy reforms and technology pressures related to the year 2000 (Y2K). The policy reforms related to software export were started by the government in 1984 when the computer policy was announced. These reforms continued into 1986, when an explicit software policy was announced. This policy recognized software sector as a key sector in the agenda for export promotion. In 1991, the Indian government announced the economic reforms policy and a major thrust was consciously given to software export [19]. Y2K pressure on the Western economies helped Indian firms gain entry into global multinational companies, and the policy reforms helped in making the transition from on-site to offshore delivery.

Before these policy reforms were introduced, the Indian IT industry was highly regulated and plagued
by many restrictions, such as compulsory licensing, tariffs, and multiple controls on private investment.

However, this scenario changed dramatically after the 1991 implementation of economic reforms that included fewer regulations, reduced tariffs, and new licensing policies. Economic reforms also encouraged private investment and simplified the investment process [1]. These reforms were vital in changing the mindset of the Indian government. The Indian government, which previously focused on highly restrictive and controlling policies, became more open and liberal. Since then, with consistent attention and investment from the government and entrepreneurial efforts from private firms, India has been able to build a strong IT portfolio as well as a solid reputation in the field.

In the early stages, the regional development of IT and related services industry in cities like Bangalore, Mumbai, Delhi, and Hyderabad can be explained on the basis of scale and scope externalities [15]. Scale externalities occur when positive externalities develop within co-located firms. These externalities lead to economies of scale because of specialization within an industry [4,21]. In the case of India, agglomeration of IT firms occurred around these cities because the government set up software technologies parks in areas that already had established IT industries in the pre-reform era. For example, in the national capital region, private companies like Hindustan Computer Ltd. (HCL) and public sector companies like the National Informatics Center (NIC), and the Center for the Development of Telematics (C-DOT) existed in the pre-reform era.

Over a period of time, there was a gradual shift of firms from other related industries in these areas which resulted in development of positive externalities across different industries. Positive externalities across different industries led to scope externalities – essentially economies of scope – because it was beneficial to combine heterogeneous and complementary activities in a region [14]. This agglomeration of IT and related industries around specific city centers in India led to the development of hubs for IT and IT-related services.

The remainder of the paper is organized as follows. §2 presents the theoretical lens that is used. §3 provides the data sources. In §4 I will discuss the role of the Indian government, the private firms and NASSCOM in the development of the outsourcing industry in India, both individually and collaboratively. §5 presents the current status of Indian firms. Then in §6, I examine the challenges that the IT outsourcing industry and India face, and what the future holds. §7 concludes.

2. THEORY

To study the collaborative efforts among the government of India, private sector firms and NASSCOM, I use the theoretical lens of public-private partnerships [33,34,35]. In the face of globalization and increasing demands that are being placed on scarce resources (financial, social and environmental), new kinds of cooperative relationships are being formed between the private sector, and local and national governments. In these relationships, the private firms are increasingly taking on roles that were previously considered to be the sole responsibility of the government.

In most cases, these relationships are formed to overcome some well-recognized crisis, which impairs the ability of the stakeholders – government, non-governmental organizations (NGOs) and private firms – to achieve their individual goals [13,34]. In case of Indian IT and related services industry, the stakeholders include the government of India, private firms and NASSCOM.

Rondinelli [34] explains that governments and private sectors cooperate to build infrastructure and provide services through a variety of mechanisms, such as contracts and concessions, build-operate-transfer arrangements, joint ventures, and informal and voluntary cooperation. This informal and voluntary cooperation is what I observe in the case of India, specifically in the context of IT and related services industry. The government of India is providing the right environment through policy liberalization and better management and the private firms are carrying out the development work.

3. DATA AND METHODOLOGY

The data were primarily collected from secondary sources, including policy reports, the government of India’s departmental websites, and private firms’ and NASSCOM’s website. Other authoritative news sources, such as Forbes, CIO, SourcingMag.com, books and published reports were also used. Additional data sources include academic papers from a variety of journals such as Information Economics and Policy, the Review of Economic Studies, Research Policy, and international publications from the World Bank and the United Nations.

In addition, I interviewed the well-known author [17,18], editor and consultant, Mark Kobayashi-Hillary, and Ajay Kumar, Secretary for Information Technology from the Indian Central Government for the State of Kerala.
In this study, I used qualitative inquiry, the hermeneutic approach [20]. This is an interpretive method traditionally used by scholars to understand literary and religious texts. It also is used in readings of human behavior, which are framed as text analogues.

I implement a three-step analysis. First, I use information from my conversations with the first interviewee to show that there are misperceptions regarding the role of Indian government in the professional community. On the other hand, I use information from my conversations with the second interviewee to present a contradictory view. This view is that rapid development in IT and related services would not have occurred without the government’s active role. Second, I use other sources of data to support the counter-argument that the role of government is crucial for development of IT and related services. Finally, my theoretical perspective is based on public-private partnerships. I will use this to evaluate the interactions between the government of India, private firms and NASSCOM.

4. THE ROLE OF GOVERNMENT OF INDIA, PRIVATE FIRMS AND NASSCOM

This section describes the individual roles and contributions of the government of India, private firms and NASSCOM. I will further elaborate on the collaborative efforts of the three parties involved and other success factors, that have contributed towards the rapid growth and success of Indian firms in the IT and related services market.

4.1. The Indian Government’s Role

It seems that the main effort for the development of the outsourcing industry in India came from the private sector. The Indian government’s efforts were few, in contrast. This point of view is not only held by generally well-informed people [2] but also is the common perception among global investors. Indian commerce minister, Kamal Nath, found this out during India’s participation in the 2006 World Economic Forum in Davos. In his own words: “Concerns about India among global investors could be attributed to a lack of knowledge about many policy initiatives. They wanted to know if you are allowed to do this or that” [16].

There exists a knowledge gap when it comes to the role the Indian government has played in the promotion of outsourcing and IT services industry in India. The situation becomes even more pronounced when compared to that of China or Russia, where the governments’ efforts to develop and promote the IT and related services industry receive constant coverage in the local and international press.

It is valuable to bring to light the extensive participation and efforts of the Indian government, along with efforts of the private firms in establishing India as a leader in the outsourcing market. Dr. Ajay Kumar, Secretary for Information Technology from the Indian Central Government for the State of Kerala suggested in an interview: “The Indian government has been extremely proactive in responding to the global requirements and situations. It is difficult to visualize the growth of the Indian IT industry without considering the role the Indian government has played.”

It may come as a surprise to many that the Indian government was the first government to set up software technology parks in 1991, and that China and Russia borrowed this infrastructure development model from India to promote IT and IT services in their respective countries. Software technology parks were initially built with an objective of initiating and promoting software exports from India. Software Technology Parks of India (STPI) society maintains internal engineering resources to provide consulting, training and implementation services. STPI’s services cover network design, system integration, installation, operations, and maintenance of application networks and facilities in varied areas, ranging from very small aperture terminal satellite systems (or VSATs, for short) to ATM-based networks [22].

The Indian government has also set up Economic Processing Zones (EPZ) and Special Economic Zones (SEZ) to not only to promote exports but to also specifically promote IT and IT-related services. The SEZs were set up in 2000 to overcome the inefficiencies and roadblocks experienced on account of the multiplicity of controls and clearances, absent a world-class infrastructure for IT services, and to attract larger foreign direct investments (FDI) in India. Since the 2005 Special Economic Zone Act was passed by the central government, approximately 439 approvals have been granted to set up SEZs in various parts of India [10].

Some of the specific benefits offered by these SEZs for firms that locate in them are:

- duty-free import and domestic procurement of goods for development, operation and maintenance of SEZ units and exemption from the minimum alternate tax;
- exemptions from central sales and service taxes, and a 100% income tax exemption on export income for SEZ units for the first five years, 50% for the next five years, and 50% of the plowed-back export profit for the following five years;
• commercial borrowing by SEZ units of up to US$500 million in a year without any maturity restriction through recognized banking channels; and,
• expedited central and state-level approvals, and exemptions from state sales tax and other levies by state governments.

Besides the above-mentioned benefits offered to the units in SEZs, major incentives are also offered to the SEZ developers. For example, exemption from customs and excise duties for development of SEZs, exemptions from central sales and service tax, income tax exemption on export income for a block of ten years.

This is just the tip of the iceberg though. The government has been consistent in continuing its investments in physical and telecommunications infrastructure. Realizing the importance of telecommunication particularly for IT and related services sector and for overall development of economy, the government of India announced the National Telecom Policy in 1994 and 1997. Government of India opened the telecom sector to competition in services such as cellular mobile services, radio paging and VSAT services [19]. Since then, a number of policy initiatives have been undertaken by the government of India and at present India is the fourth largest telecom market in Asia after China, Japan, and South Korea. The Indian telecom network also is eighth largest in world and second largest in emerging economies [7].

The investments are not only focused on urban areas, but they are focused on developing rural areas as well. In the 2008-2009 budget, the Indian government allotted INR140 billion (approximately US$3.3 billion) for rural infrastructure development. The Indian government, in association with other non-governmental organizations (NGOs), is working towards providing basic infrastructure as well as Internet and telephone connectivity to Indian villages. They are setting up village knowledge centers to promote literacy, skill training and employment. Related programs are currently under way in ten Indian states. This is especially important for India because nearly 72% of the total population still resides in rural areas [5; 30]. In addition, the government is working towards improving the quality of education, increasing the transparency within the government, and providing a more conducive environment for industry growth.

The government recently implemented e-governance structures for 32 of its departments, to provide citizens with easy access to services and to make these services efficient, reliable and transparent [11]. It increased spending in the areas of education to 20% or US$10 billion, and health to 15% or US$7.5 billion in the 2008-09 budget. It systematically and gradually reduced import duties on computer software from a high of 114% to nil [26]. In addition, the government recently increased its efforts to provide higher security, and has been working in cooperation with NASSCOM [26] since 2000 to develop and implement different aspects of the 2000 Information Technology Act.1

Even after eighteen years of consistent efforts, the general opinion about the Indian government in the professional community is that it is not doing its part. It also is perceived to be slow and not proactive enough in promoting IT and related services, and India’s success is a result of free market play and benign state neglect [2]. This opinion is reflected in comments by my first interview respondent, in his book Building a Future with BRICS: The Next Decade for Offshoring [18]. He notes the role the Indian government has played in promotion of IT outsourcing: “Even now the government itself is still quite behind the curve and needs to be led by NASSCOM.”

The reason behind this perception about the lack of effort on the part of the Indian government can be explained first by the way Indian government is handling the IT industry development process. It has adopted a policy of facilitation through non-interference. The government of India is providing the right environment through policy liberalization and better management and the private firms are actually carrying out the development work. For instance in case of the Special Economic Zones, the government has provided tax exemptions, faster processing and duty-free import facilities, and other attractive inducements, but the development of the physical facilities is being carried out by different private firms that are working to develop these zones.

As a result, the accomplishments of the private sector firms are visible whereas the facilitating role that the government plays remains unseen. Secondly, this process is not a completely centralized one. Close cooperation is required between the state and the central government. Unfortunately though, not all of the state governments are equally progressive, and hence, delays are caused in the development process.

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1 In May 2000, the Indian Parliament passed an important legislation bill now known as the 2000 Information Technology Act. The Act covers cyber and related IT laws. Some of the issues addressed by the Information Technology Act include cyber-crime, digital authentication, regulation of certifying authorities, data security, and digital signatures.
This is reflected in the uneven distribution of IT companies in eight to ten states out of the Indian union’s 28 states. Thirdly, the sheer size and scale of these projects are gigantic and implementation has been slow. Fourthly, democracy has its price; the government cannot force people into complying and many a time delays are caused in aligning resources and getting everybody to agree on how to move ahead.

There is no doubt about the fact that private firms have played a crucial role in the success of IT and related services industries but primarily it has been the investments made by the government of India in building the industrial infrastructure for capability development and supply base for qualified manpower that is responsible for India’s success in IT and related services market [19].

Another unique aspect of the progress India has made to a position of prominence in the IT services outsourcing industry is the very close collaboration among Indian firms, independent trade bodies like NASSCOM, and the government. The efforts of large, medium and small Indian firms in the promotion of outsourcing in India have all played different, but special roles.

4.2. Private Firms’ Roles

The top six Indian private enterprises that have promoted offshoring in India are, Satyam, Wipro, Infosys, TCS, Cognizant and HCL. They are often referred to as the “SWITCH” companies. They also have been instrumental in establishing India as a place to go for high quality IT-related services. Some of these companies showed astonishing foresight in the early 1990s. While the Indian government was slowly starting the process of liberalization, these companies were tapping into potential outsourcing market. As a result, the SWITCH companies accounted for nearly 2% of the total global US$672 billion IT services market, in 2006. [32].

In the early years of offshore outsourcing, different service providers (including TCS, Wipro and Infosys) collaborated to build a strong country brand image, despite their competition with each other. In addition to the available talent pool and consistent with government efforts, their collective entrepreneurial drive and global delivery capabilities led India to become recognized as the leader in quality IT and business process services. According to Mark Kobayashi-Hillary, there are several key factors that have helped India in maintaining its leadership position: “[The first] thing is the experience and the trust. India has created a brand ... Secondly, India has mastered the quality standard before everybody else ... Thirdly, the close relationship between NASSCOM, private sector and government is quite unique ...”

Since the very beginning of the economic liberalization process in 1990, the leaders of companies like Infosys, TCS, HCL and Wipro have collaborated with the Indian government and NASSCOM. They have been closely involved in the planning and policy development process of the IT industry. Currently, the SWITCH companies are actively participating in industry development programs with the Indian government. The main concerns of the Indian government and the IT industry are infrastructure and talent pool development. While the Indian government focuses on infrastructure development and education in urban and rural areas, the private companies are focuses on enhancing the quality of the talent pool. Companies such as Infosys, TCS, and NIIT are proactively collaborating with academic institutes to provide lab facilities, hands-on training, summer internships, and workshops for faculty and students. Many companies have also opened their own institutes to train the emerging talent in technical skills and soft skills like communication.

Contrary to expectations, it is not just a handful of large private companies that are responsible for the outstanding success of IT and related services business in India. Mid-size and smaller local companies are also competing for their share of the IT services pie, and in the process, they are further helping to develop the industry.

Consider a mid-size company like AdventNet (www.adventnet.com), which was started by an Indian entrepreneur, Sridhar Vembu, with his brother and another partner. At present it employs 600 people in its Chennai development center and eight in Silicon Valley, and the company recently launched its own on-demand office suite called “Zoho” [24]. This suite is fast gaining popularity because it has capabilities similar to Microsoft Office. The company also hosts customer relationship management service that is free for small companies and costs a mere US$12 for the larger ones. This price structure is far lower than that of a well-known American company, Salesforce.com (www.salesforce.com), which charges US$65 per user [24]. In addition, Zoho AdventNet’s portfolio consists of OEM business and an enterprise management software application called “ManageEngine,” which is quite well established. The fascinating aspect of mid-size companies like AdventNet is that they are not hiring people from the top technical colleges. Instead, they are training talented people from average colleges and weak economic backgrounds in India with technical skills,
and thereby contributing significantly to the development of the local talent pool while controlling costs for their clients [24].

The domestic market for IT and services-related services has been gradually growing over the last five years, as reflected in Figure 2. Most notable is the growth in the services sector, which is faster than that of the overall domestic IT market. It is important to take the domestic market into consideration. Not only do growth and development in the domestic market have a significant impact on the diffusion of IT. They also can contribute significantly towards building product differentiation, developing competitive advantage, and delivering value-added services [3,9].

Figure 2. Indian IT Domestic Market, 2004-2008

Note: Source of the data is NASSCOM [28].

4.3 The Role of NASSCOM

NASSCOM was set up in 1988 to facilitate business and trade in software and services, and to encourage advancement of research in software technology. Since its inception it has played a crucial role as an advisor, consultant and coordinating body for the IT-BPO industry in India. This organization’s web site [www.nasscom.org] indicates that “NASSCOM is the premier trade body and the chamber of commerce of the IT-BPO industry in India. NASSCOM is a global trade body with more than 1,200 members, of which over 250 are global companies from across the U.S., the U.K., the European Union and Asia Pacific.”

NASSCOM’s member and associate member companies are in the business of services, products, IT infrastructure management, R&D services, e-commerce and web services, engineering services offshoring, and animation and gaming. The membership base constitutes over 95% of the industry’s revenues in India and employs over two million professionals. NASSCOM is a non-profit organization, registered under the Indian Societies Act of 1860.

NASSCOM has played an important role in bringing non-IT sector companies and IT sector companies together to facilitate the growth of the domestic market. NASSCOM runs a number of other initiatives related to education, security and innovation to create an environment that is conducive to cooperation between different industry sectors and to connect industry, academia and government. NASSCOM has been very active since its inception in closely interacting with the government of India to develop industry-friendly policies.

In the last two decades, NASSCOM has become one of the most influential independent trade bodies in India. It not just India-focused, although its primary aim is to help India maintain the leadership position in the global sourcing market. It has linkages with 40 industry associations globally. It also runs its own research and marketing intelligence services, and actively participates in international trade development [29].

4.4 Success Factors

An interesting fact about India’s success in the IT industry is that it is not solely the government of India or a handful of private enterprises that have been pivotal in its success. Rather, it is the close interaction and complementary efforts of the government and private enterprises, facilitated by NASSCOM, which has led to the tremendous success.

With the growth and development of software exports in mind, the government of India initiated new policy measures in the 1990s. One of the most important initiatives was to allow the participation of private sector in policy-making [19,25]. Since then the government, NASSCOM and the private sector firms have worked in parallel to develop policies conducive for IT and related services growth and development. It is this close cooperation among the three that has given India a unique advantage and provided it the thrust needed to reach where it is today. There are other factors that have contributed to the success of Indian firms.

• There is a diverse portfolio of services available, such as custom application development, IT consulting, engineering services and software products. (See Table 1.)
• Early adoption of standardized processes and quality standards such as CMM level 5, Six Sigma and ISO 9000 has occurred.
• A skilled talent pool also is available.
• There is high proficiency in English language compared to India’s competitors.

• India predominantly serves the U.S. and the U.K. It has strategic advantage in the U.S., at present, because it is the largest importer of outsourcing services, while Europe’s market is growing fast.

Table 1. IT, Software and Services Exports, India, 2006

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<td>Custom Application Development</td>
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Note: NASSCOM [27] is the source of this data. Different sources provide different information about India’s share, for instance India’s share is listed as US$39.6 billion [8].

5. WHERE DO INDIAN COMPANIES STAND TODAY?

In the last decade, the outsourcing market developed exponentially, but in the meantime, the competition has also gotten fiercer. Any country and any company with the requisite infrastructure can provide the IT services that are demanded in the global economy. If a country has suitable workforce and broad-based engineering and technical knowledge, and the cost of labor in the economy is lower than many other countries, they simply have to commit to building capabilities that are needed to market, launch and deliver IT services. India faces competition from nearly 53 other countries relative to its leadership position in the outsourcing market. Therefore, India’s road ahead will be a challenging one.

To maintain their position and further expand in the world market, the giants of the Indian outsourcing industry are acquiring companies in other continents. This move permits them to acquire clients, achieve geographic proximity, and develop closer relationships with customers. For example, in the last two years, Wipro Technologies has acquired three companies in the U.S. and three companies in Europe [36]. Meanwhile, TCS has made inroads into the Latin American market and has recently acquired companies in Chile and Brazil. TCS and Infosys have expanded their bases of operation further by acquiring companies in Australia.

Indian firms are now competing at every level against their already-established global counterparts. In the last two years, Indian companies have consistently ranked among the top firms on the basis of the services provided, product innovations and management practices. In a recent bestselling book on outsourcing, The Black Book of Outsourcing [6], five Indian companies, including Satyam, Infosys, Patni, TCS and HCL, made the list of the top-ten best-managed global outsourcing vendors.

Similar to Indian firms’ activities in foreign markets, globally-established companies such as IBM, EDS and Accenture, have been acquiring companies in India to expand their services base and outsourcing capacity. IBM, for instance, recently acquired five companies in India. The most prominent is Daksh, a company with 6,000 employees [36], EDS also entered India through an acquisition of Mphasis, with 11,000 employees [12].

6. WHAT CAN THE INDIAN GOVERNMENT AND PRIVATE FIRMS DO?

As the outsourcing market develops, the road to success will get steeper for India. The biggest potential threat that India faces right now is India itself. This threat encompasses a wide range of issues: the sheer size of IT and the IT-related services industry, the development of infrastructure for telecommunication services, transportation, basic amenities, and so on. Other related dimensions include the quality of life in India: the unacceptable but continuing poverty levels, the necessity of rural development, and the importance of improving education for the population, to name a few. India is a country of 1 billion-plus people, and nearly 250-300 million of them fall below the poverty line. Therefore, to face this challenge, the Indian government will have to continue to develop the infrastructure, higher education, healthcare and basic amenities at the grassroots level. It will have to make consistent efforts and support the development of other related industries such as the semiconductor and telecommunication industry, like it has supported the IT industry. 2 The Indian government and the private firms need to make concentrated efforts to develop the domestic market for IT and related services, since the domestic market provides strategic “home court” advantage, and can be beneficial for developing value-added services [3].

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2 The government of India announced the semiconductor policy in February 2007. One of the main features of this policy is that the government will bear 20% of the capital expenditures during the first ten years for units located in SEZs and 25% for units outside the SEZs.
Going forward, the threat of intense competition will continue to loom over the country. The competition will come from countries that have been participating in the global market for some time and have established themselves, for instance China, the Philippines, Russia, Brazil, Ireland, and Romania. To maintain their position, Indian firms will have to use innovative strategies, make use of past experience and the strong relationships they have developed, and move beyond their focus on cost-savings to deliver far higher value.

To compete in the global market, private firms have been working together with the Indian government to address some of these issues. In addition, national and state governments in India are making renewed efforts to sustain the development of urban and rural areas. One such consolidated effort has been in the field of education. To promote literacy, the government of India, in collaboration with state governments, has launched several schemes, such as the National Program for Girls at the Elementary Level, the Mid-Day Meal Scheme and Sarva Shiksha Abhiyan (Education for All). One of the main goals of these various schemes is to provide elementary education for all children between the ages of six to fourteen by 2010 [23].

These efforts will have to steadily continue to create the basis for India to sustain its competitive advantage in the global market. The Indian government will have to increase its pace, and reduce the time lag that observers have noted on the most-needed investments and programs. One way to reduce the time lag would be to involve private sector firms in policy-making for other industry sectors. This is similar to what the Indian government has done for the IT and related services sector. If India truly wants to maintain its leadership position it will have to effectively and efficiently overcome these challenges, and continue its development with long-term goals for transformation in mind.

7. CONCLUSION

There are a few lessons to be learned from India’s success in the IT and related services market. There are several main drivers behind India’s success.

- First is the trade and economic policy reforms from 1984 to present.
- Second is the consistent and continuous efforts by the Indian government to develop the infrastructure (such as technology parks, SEZs and educational institutes). This infrastructure is especially important for the growth and development of, skill and knowledge intensive sectors, including IT and related services.
- Third is the close cooperation and interaction between the government of India, the private sector firms and independent trade body- NASSCOM.
- Finally, there is the direct involvement of private sector firms in the policy-making process.

This combination worked for India and there is a possibility that to some extent this experience can be transferred to other countries that are in the process of developing IT and a related services sector.

Another important aspect that this paper brings to light is that the Indian government has played a pivotal role in the development of the outsourcing and IT services industry in India. The knowledge gap about Indian government’s involvement during this transformation created misperceptions about the its development efforts and government’s role in the promotion and development of IT services. This is especially true when India is compared to the other BRIC countries, China, Russia and Brazil. Other factors that have contributed to the misconception that the Indian government is a dormant partner include the unavailability of information explaining the government’s efforts and India’s relatively weak presence in international events.

It is important to clarify these misconceptions since they affect the image of the government of India and the presence of India in the global market. Second, they can indirectly influence the development of the industry. Investment practices may be influenced by misconceptions and insufficient information availability about the policies and practices of government of India.

Despite the challenges, Indian companies have been able to build a strong brand image in the global market and establish India as a destination for the purchase of high quality IT products. India is presently the leader in the global outsourcing market but it remains to be seen how India will meet the future challenges, and whether the Indian government will be able to keep up its development efforts in the IT services industry.

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Acknowledgments. I am grateful to the anonymous reviewers, Sajda Qureshi and Peter Wolcott, who provided insightful comments that helped me to sharpen this paper. I also extend my hearty thanks to Rob Kauffman, Ajay Kumar and Mark Kobayashi-Hillary for their helpful comments and perspectives on the IT outsourcing industry. I would further like to thank colleagues Hina Arora, Degan Kettles, Yong-Jick Lee, Robyn Raschke, Trent Spaulding, Ting Li, and Dan Soper. They reviewed and commented on the paper several times in the cycle of its development. Juliana Tsai kindly provided editorial advice on my final draft.