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The Use of Employee Stock Options in India:

The Institutionalization of Compensation Practices

in the Global Technology Sector

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ABSTRACT

This paper examines the forces shaping the diffusion and institutionalization of employee stock option programs (ESOs) in the Indian technology sector. Using interview data, the findings indicate that although ESOs diffused rapidly within Indian technology companies during the late 1990s, these companies did not grant options as deeply within their organizational hierarchies as did technology companies in the United States. This paper examines the role of forces at the individual, organizational, and organizational field levels in shaping the legitimacy of the practice in India and generating cross-national differences in ESO practices. The results indicate that the more selective use of ESOs in India has been driven in part by the reactions of organizational decision-makers to the views of stock options among technology workers, namely, their desire for cash in highly mobile labor markets, aversion to the risk of stock market investing, and low level of knowledge about stock options. In addition, corporate managers have been constrained in by other organizational factors in their ability to grant large number of options broadly within their organizations. Finally, the absence of certain field-level forces that are important conduits of information about management practices also shaped the level of institutionalization of ESOs in India. By explicating the multilevel forces that shape how organizational practices move unevenly across borders, this paper shows that the globalization of production is not driven solely by the efficiency of free markets or the inexorable logic of capitalist accumulation. Rather, globalization takes place within and between capitalist organizations situated within local, regional, and national economies, and broader social, political, and cultural environments.

Introduction

The recent acceleration in the globalization of technology production represents a predictable extension of the logic of advanced capitalism, with potentially profound implications for economic productivity and development, the organization of work, and the inequality of income and wealth in the developed and developing world. Although it is tempting to claim that the globalization of technology work is characterized by the same central dynamic that has characterized the globalization of manufacturing work in the last two decades decades (i.e., a large scale transference of production and jobs from the advanced capitalist countries of the United States, Western Europe, and Japan to less developed economies in the Third World, resulting in downward pressures on global wages, employee benefits, and working conditions), the reality of the globalization of high-tech work and production may be much more complicated.

The case of India is a rich one for examining the causes, characteristics, and consequences of the globalization of technology work and production. Since the 1980s, India has become a formidable competitor in a number of technology markets, most prominently software and information technology. Although the Indian software and IT sectors began with a focus on routine tasks such as software coding, in the last decade, a number of Indian companies have emerged as global industry leaders in the creation of increasingly sophisticated and customized products. Also in the last decade, dramatic technological advances have accelerated the ability and capacity of multinational technology companies to shift increasingly more of their production activities to cheaper labor markets. India has been the recipient of a growing number of these jobs because of its highly educated, highly skilled, English-speaking supply of engineers, scientists, and other IT workers. This trend of offshoring has been the subject of an increasing amount of media attention and policy debate in the United States. Although debates about job loss in the United States are important and necessary, without legal barriers, institutional restraints, or popular political pressure, it is unlikely that U.S. companies will stop moving jobs- blue collar, white collar, or others- to cheaper labor markets. Moreover, a singular focus on the effects of globalization on workers in the United States hinders more in-depth analyses of the deeper causes, characteristics, and wide-ranging consequences of the globalization of knowledge work, for both developed and the developing societies.

For example, high-tech companies in the United States, particularly in the software and internet industries, have historically embraced organizational innovations that promote a more equitable distribution of profits and power, relative to practices in companies in more traditional manufacturing and service industries. These innovations include the widespread granting of employee stock options (ESOs) to most or all employees and the decentralization of decision-making authority (Blasi et al. 2003, Saxenian 1998). Anecdotal evidence from media reports suggests that firms within similar industries in India are also adopting similar types of organizational practices. If these practices are diffusing widely across borders, the globalization of technology work may be taking a fundamentally different shape than what has occurred in manufacturing: a large scale transference of production and jobs from the advanced capitalist countries of the United States, Western Europe, and Japan to less developed economies in the Third World, resulting in downward pressures on global wages, employee benefits, and working conditions. However, we still know very little about the structure of compensation and the organization of work within the global technology sector, particularly in India. To begin addressing this gap, this paper will examine the use and institutionalization of one organizational practice, employee stock options in India. It is based on data collected in interviews conducted in India in early 2005.

Despite the sociological importance of employee stock ownership to altering traditional patterns of wealth distribution, corporate governance, and systems of authority within capitalist organizations, the phenomenon has received little academic attention. The practice of granting stock options to most or all employees was central to the Silicon Valley model in the U.S., but has not had the same prominence in the Indian technology sector. My fieldwork revealed that ESOs in general have become a common compensation tool in the Indian technology sector, but that Indian companies have been more selective in their grant practices than in the U.S. Although some Indian companies began granting stock options to most or all employees around 2000, the bursting of the stock market bubble in the United States severely damaged the fragile legitimacy of the practice. In this paper, I will examine the reasons why Indian technology companies have taken a different approach to employee stock options than U.S. companies. Although the performance of the stock market has been a key driver in shaping the degree to which stock options were used, this process was also shaped by a much broader set of forces. The differences between

the use of stock options in India and the United States do not necessarily mean that overall, compensation systems and the organization of work are dramatically different. My fieldwork also revealed that Indian companies are using other organizational practices that broaden the distribution of the wealth and authority as compared to traditional industries. Hence, the fundamental conditions under which knowledge work is executed in India appear to be similar to these conditions within the United States, i.e., conditions that represent a more equitable distribution of profits and power than more traditional types of work. This raises the interesting question of whether knowledge work *requires* such conditions or if management practices developed within Silicon Valley in the United States have simply become a template for knowledge work.

This paper will only be able to provide preliminary answers to this question. Its more modest focus will be to examine the reasons why Indian technology companies have taken a different approach to using stock options. My analysis takes seriously the suggestion offered by Arias and Guillen (1997) that the literature on the cross-border transfer of organizational practices could benefit significantly from incorporating analyses conducted at the level of the organizational field. I offer such an analysis in this paper by examining not only the role of individual and organizational level forces shaping the transfer of practices from the United States to India, but also the role of forces at the interorganizational, industry, field, and societal levels such as labor market dynamics, attitudes about investing and the stock market, human resource and consulting professions, the media, the state, and nongovernmental organizations. My data indicates that organizational practices do not effortlessly move across borders. By explicating the forces that shape how management practices move across borders, I hope to show that the globalization of production is not driven solely by either the efficiency of free markets or the inexorable logic of capitalist accumulation. Rather, globalization takes place within and between capitalist organizations situated within local, regional, and national economies, and broader social, political, and cultural environments.

Data Collection

I collected data on the use of ESOs in India through a series of interviews conducted in February and March of 2005 in Pune, Hyderabad, and Bangalore. I interviewed a total of 20 people, which included 18

Indians and two Americans. Fourteen of the 20 interviewees worked for 8 different companies: 6 were employed in 3 Indian-based firms, while the other 8 worked for 5 different multinationals, all but one of which was based in the United States. Of the 14 company representatives, ten worked as high-level human resource or compensation and benefits managers, one was a middle manager, one was an IT consultant, and two were executives. I also interviewed four Indian consultants (two at one Indian firm and two who worked for one American firm) and two Indian academics. Interviews were open-ended, but based on a set of standard questions and lasted from 1 – 2 hours each. I inquired about how their own companies (or clients) were using stock options, and probed their broader views about the use of employee stock options and equity compensation in India more generally, as well as the development of the technology sector in India.

This sample of informants is definitely limited and not representative of the population of Indian technology firms, MNCs based in India, or the consulting community. However, most of my informants working within technology companies occupy high-level positions (e.g., director of compensation, vice-president of human resources) that provide a broad perspective on the use of stock options and other compensation practices within their own companies and within the technology sector more generally. Informants working in consulting or academic positions possessed particularly broad industry, economy, and societal-level perspectives. Hence, although my sample was small, it included informants who all have an expansive perspective of stock option practices and extensive professional and industry networks, and are therefore well-qualified to assess current practices, the history of stock option practices, and broader trends. What follows in the rest of the paper is my summary of the important points that emerged from the transcripts. The analysis and conclusions I draw from the data should be viewed with some caution regarding their generalizability. I have removed any direct references to individuals or companies to protect the confidentiality of my informants.

Emergence of India as a Global Technology Center

Since the 1980s, India has become a formidable competitor in a number of technology markets, most prominently software and information technology. This sector in India has become extremely diverse in

terms of products and markets. More recently, India has started to become a center for the research, development, and manufacture of pharmaceuticals and related biotechnology products. With the expansion of the software and IT sectors, India has also become a location for high-end research and development within a variety of manufacturing industries, such as automobiles. India's comparative advantage in terms of knowledge work has always been its highly educated, English speaking workforce, and low wages relative to the United States and Western Europe.

My fieldwork focused primarily on the software and IT industries. From the 1980s through the mid-1990s, the Indian software industry developed from a low cost location for routine software coding into a provider of increasingly complex and customized systems for multinational companies all over the world. In the late 1990s, India emerged as a global center of software and IT products because of the increasing sophistication of India's knowledge base and high levels of productivity. In addition, electronic communication and file transfer capabilities expanded dramatically in the late 1990s, allowing Indian companies to serve a growing base of clients all over the world. These technological developments also motivated multinational companies to outsource more significant parts of their production processes to India, by either establishing their own local operations centers or contracting with Indian firms. This dramatic growth continued until the crash of the stock market in the United States in 2001. Indian software and IT companies recovered relatively quickly and have continued to move up the value chain in terms of the services and products the provide and the markets they serve. It was clear from my interviews that Indian firms want India to become a global center of technological innovation within the next decade to rival Silicon Valley. As many informants and the existing literature indicate, however, India faces serious challenges to realizing this vision, a set of challenges that must be addressed at both the industry and societal levels, and for which the state will have to take on a new role to address effectively.[1]

[1] For a more detailed treatment of this history and the obstacles facing the development of the Indian technology sector, see Dedrick and Kraemer, 1994; Lakha, 1994; Parthasarathy, 2004a 2004b; Patibandla & Petersen, 2002; Prasad 1998; Saxenian, forthcoming, 2002, 2000).

A Brief History of Employee Stock Options in India

A stock option gives an employee the right to purchase a fixed number of shares at a fixed price for a fixed period of time. Since there are few regulatory requirements regarding how companies should distribute stock options, companies have a great deal of freedom in deciding who gets options, how many, how often, and under what conditions. For example, companies can grant to only the CEO, to all employees, or to any number of employees in between these two extremes, and decisions regarding the allocation of stock options among employees remain entirely with corporate management. Researchers still know little about patterns of distribution of ESOs within organizations, and gaining a clearer understanding of these patterns is essential to understanding the broad consequences of employee ownership through this mechanism. Researchers have also employed imprecise terminology in ESOs. I use the term employee stock options (ESOs) to refer to the general practice of granting stock options to any employees. I will use the term broad stock options (BSOs) to refer to plans that grant to most or all of their employees. My interviews revealed that in the Indian technology sector, the most common method is for companies to grant options below the management level, but to a targeted group of technical workers, rather than to all employees, with some variation in terms of the percentage of the workforce receiving grants. I use the term core employee stock option grants (CESO) to describe these types of grants. These are not legal definitions or terms that have an agreed upon definition among practitioners or academics. I use them here for descriptive and comparative purposes.

There is little empirical data on the historical or current incidence and structure of stock option plans in Indian companies. Although my interviews did not produce reliable measurements of the incidence of plans, i.e., the number of companies granting stock options to employees, they did generate rich data about the structure of employee stock option programs, i.e., who receives options, how many, how often, and how these decisions are made. Informants also provided detailed impressions of broader historical trends. Indian technology companies have used stock as a form of compensation since the sector's inception in the 1980s, but ESOs only emerged as a compensation mechanism in the mid-1990s. Prior to this, companies in the nascent sector were using other forms of stock-based compensation, such as direct stock grants. Some of the pioneering Indian IT companies provided stock to a broad group of

employees, primarily because of the ideological commitments of their founders to egalitarian approaches to management.

The general history of stock option use in Indian technology companies is reflected in the histories of stock option use within individual organizations.[2] The individual histories that informants recounted in their own and other companies all appear to have very similar characteristics. Many companies began granting stock options to nonmanagers some time in the mid-to-late 90s, usually around 1997, although some companies were granting a few years earlier. These grants went below the top management team to middle managers and selective groups of technical workers. Some companies granted options more broadly than others, but the variation was not dramatic. For example, one company granted to employees at all levels of their technical staff, but not necessarily to all employees within these levels. Another company granted to all technical employees down to a certain level. Another company only granted to top managers and the highest level technical workers. These stock option grants seldom, if ever, went to nontechnical employees, such as those in traditional administrative functions, in contrast to stock option practices in U.S. technology companies. These grants were also used primarily as a way to retain employees, rather than as a hiring incentive. The number of options that employees received was usually based on their grade level and individual or group level performance. The initial expansion of ESOs in the Indian IT sector that began in the mid-1990s was driven by the rapid growth of this sector. Companies recognized the necessity of retaining their key workers, and stock options began to gain legitimacy as a way to accomplish this. The initial adoption of ESOs by Indian companies was a direct results of the broad diffusion of ESOs in the U.S. high-tech sector. Many Indian managers and technical workers worked in the United States or were embedded within cross-national networks. In addition, multinational companies from the United States were aggressively setting up operations in India and hiring within local labor markets at this time, and practically all of these companies were granting stock options very broadly to employees.

[2] This section on the history of ESO practices applies to companies incorporated in India and does not include MNCs. The remainder of the paper following this section reflects the views of all informants, including those in MNCs.

According to many of my informants, as the Indian software and IT sectors entered a state of rapid expansion at the end of the late 1990s and early 2000's, and more US-based multinational companies came to India, labor shortages tightened further, and the practice of broader stock option grants began to diffuse among more Indian companies. Companies that had never granted options before began to do so and those with plans broadened the number of employees receiving them. Some companies even extended stock options to all employees, including nontechnical workers. According to one informant, stock options became "almost a market practice" by 2001. However, the Indian technology sector felt the effects of the subsequent crash of the stock market in the U.S. in 2001. Many companies were traded on the US stock market and/or did a high percentage of their business with US-based clients. The crash hurt the fragile legitimacy of ESOs in India. Similar to employees in the U.S. who held stock options, optionees in India saw the potential wealth provided by stock options diminish substantially or evaporate completely due to the collapse of the price of technology stocks. The common view that stock options had no downside seemed particularly naïve at this stage. This myopia was not just an Indian phenomenon, but was also prominent in the United States. Since the crash Indian companies have scaled back the broadness and number of ESOs or stopped granting altogether.

This brief history reveals that other than the period from roughly 1999-2001 when labor market shortages were most acute and companies began granting stock options to broader groups of employees, Indian companies have not granted and do not currently grant stock options to as broad a group of employees as U.S. companies. In India, stock options have primarily been used as a retention tool for a more selective group of employees. This differs from the experience of the U.S., where technology companies have used options to both retain current employees and attract new ones, and in which BSOs have been an important component of a broader management philosophy that has become known as the Silicon Valley model. In addition, ESOs have also had limited spread to non-knowledge based industries in India, with the exception of executive and management grants. As Indian executive and managers have witnessed their US counterparts acquire enormous wealth through stock options, they have started demanding similar benefits. However, as one informant noted, the size of executive grants still remains modest in comparison to the size of the grant packages going to U.S. executives, since there are stronger

cultural norms against excessive wealth in India, but this is starting to change. My interviews revealed that multinational companies based in India appear to simply extend to Indian employees the grant practices they have in place for U.S. employees to their Indian counterparts. Most of these companies will, however, adjust the number of options granted to reflect local currency values. Hence, US based companies that grant stock options to all employees in the US tend to offer stock options to all employees in India. Those US companies that have more selective grants in the US have more selective grants in India.

The data presented here on the history and current use of employee stock option programs does not present a simple picture of a compensation practice moving effortlessly across borders, with Indian companies simply imitating their American counterparts. The use of ESOs in the two countries has differed in significant ways. What accounts for this difference? Although it is clear that the use of stock options in India has been importantly shaped by the movements of the U.S. stock markets, and it is tempting to think that this is the only force, my interviews revealed a more complex picture.

Forces Shaping the Use of Employee Stock Options in India

My interviews revealed that the use of ESOs by Indian companies has been shaped by four primary sets of forces: labor market conditions, common understandings about stock ownership and stock options, strategic human resource management decisions at the organizational level, and the absence of certain actors within the broader organizational field that can be important channels for the diffusion of ideas about management practices (Arias and Guillen 1997).

Individual Level Forces: The Perspectives of Employees

Although India creates a large number of highly trained technology workers every year, the dramatic expansion of the technology sector means that severe labor shortages have been a relative constant in the Indian technology sector. This shortage was particularly acute in the late 1990s, receded during the end of 2001 and 2002, but has become a very serious issue once again. All of my informants noted that attracting and retaining employees was one of their most significant challenges. This labor shortage gives

employees significant leverage to shop around for multiple job offers and negotiate aggressively for their compensation. Interestingly, employees appear to only negotiate for cash compensation. Practically every one of my informants emphasized that "cash is king" for technology employees in India. This was the single most common and emphatic theme raised in my interviews. Employees welcome other benefits above and beyond their base cash compensation, such as stock options or variable pay, but do not value these as highly as cash.

This desire for cash and the devaluation of other forms of compensation is the result of a number of forces. First, employees want immediate cash to take care of and provide financial security for themselves and their extended families. Also, there is only a small social safety net in India. If employees lose their jobs, most are on their own for healthcare and other necessities. If the tech sector goes into a downturn, employees who have saved up cash from previous employment will be much better prepared to deal with loss of employment. In addition, the technology sector has created a new middle class, however small in proportion to the rest of the population, and members of this new class want to purchase homes, cars, and consumer goods. Moreover, levels of cash compensation have escalated rapidly among technology workers because of high labor mobility. The most common career ladders for technology workers are not those within a single organization. Instead, employees in the Indian technology sector advance in their careers by moving from company to company every couple of years. These moves are usually significant promotions and come with a significant increase in base salary. In addition, the MNCs that entered in earnest in the late 1990s were able to pay high cash compensation, which drove levels up even further.

Second, just as employees view cash compensation very positively, they view stock options negatively. Few employees realized significant gains from their stock options in India, and the widespread use of stock options among broad strata of the technological workforce only began to occur just before the crash. Since the value of a stock option lies in the difference between the price at which employees received the right to purchase stock through the option and the price on the date of exercise, after the crash, most employees had the option to buy shares at much higher prices than the then current stock prices. This situation was exacerbated by earlier media coverage that presented stock options as having no

downside. In addition, the startup sector in India is only in its infancy. In the US high-tech sector, startup ventures were ubiquitous and arguably formed the backbone of the innovative Silicon Valley economy. These startup companies granted options to virtually all employees, and created the situations in which employees reaped astronomical windfalls from exercising their stock options once the company went public in a bubble market. In India, in contrast, the startup sector is still in a nascent stage with large, established, public Indian software companies and multinationals getting most of the work. Even among startup companies, the end goal of the founders is not to just sell the company, which in India can be viewed as a failure of the entrepreneur. For these reasons, few employees in India made significant money off of their stock options. This has not made employees interested in receiving options, although many of my informants noted that options have more legitimacy in the eyes of employees who have a friend or relative who made some money off of their options. In addition, many informants indicated that in general, Indians do not view the stock market as a place to make money or even a place to put their assets. This is in sharp contrast to attitudes about the stock market in the U.S. Indians are more risk averse, and the state has only recently put stronger controls in place within India's stock markets. Hence, the legitimacy of the stock market itself remains unstable in India.

Finally, there is also a lack of knowledge and awareness about stock options among Indian employees. Stock options are complicated forms of compensation that require employees to understand new tax rules, avoid securities regulations, and engage in long-term financial planning. This type of knowledge often accumulates gradually through corporate educational programs and other information channels, such as media reports. One informant noted that Indian companies are doing very little in terms of educating employees about stock options and that media coverage has been sensationalist. However, some informants indicated that employees at different levels have different attitudes, and part of this may relate to knowledge and awareness. For example, managers and executives tend to value options more because it is more common for them to receive stock options and when they do, they often receive a significant number of them. Managers and executives also have more experience with investing and the stock market. Lower level, nonmanagement employees have had limited access to generous stock option

awards, so have tended to value them less. However, this also means that they have little experience with, awareness of, and knowledge about stock options, which contributes to employees' negative perceptions.

This leads to an interesting point. Most of my informants emphasized emphatically that tech labor markets are very tight and that as a result, employees are negotiating aggressively for cash. One would think that if skilled labor is in such short supply, employees would be able negotiate for both cash stock options, as well as other benefits. Although part of the reason they do not is because they do not value options all that highly, another factor may be that employees still do not have a broad enough knowledge about stock options, how they work, how they can benefit from having them in the long term, and how to negotiate for them, even though the labor market conditions are fertile for employees to obtain them above and beyond their cash compensation.

. This section has reviewed the perspectives and incentives of Indian knowledge workers regarding compensation and benefits. Employees are most interested in receiving cash and do not view the stock market as a place to make money, with the collective knowledge level about stock options and how they work remaining low. Since stock options are not highly valued by Indian employees, there is little incentive for companies to invest resources into designing and implementing plans. This is not to say that India tech workers only value cash. Most informants noted that employees also value good working conditions, respect and autonomy in their jobs, opportunities to work on interesting projects, opportunities to learn, and opportunities to work for high status organizations.

Organizational Level Forces

All of the representatives of Indian companies whom I interviewed indicated that they had scaled back or stopped their option grants recently because employees simply did not value them. In this situation, it is rational for corporate management to be reluctant to invest in designing, implementing, and maintaining a BSO. However, those who make the decisions regarding the implementation, design, and maintenance of stock option programs, which includes top-level executives, human resource managers, and compensation and benefits managers, as well as managers in divisions of finance and accounting, have been influenced by other forces that have contributed to the limited use of BSOs.

For example, since the end of 2002, companies in India, the United States, and elsewhere have become very concerned about changes in the accounting treatment of stock options. Historically, companies traded on US stock markets have not had to recognize the value of ESOs as a compensation expense. However, the corporate scandals in the United States in 2001 and 2002 created an opportunity for accounting regulators, the Financial Accounting Standards Board (FASB), to implement regulations in 2004 that required companies to recognize an expense for stock options granted to employees. Since many Indian technology companies are traded on the American NASDAQ, this change was a significant one for them. In fact, a real threat of this regulation first emerged at the end of 2002. As my informants indicated, the threat and implementation of expensing meant that Indian companies had to start thinking more carefully about whether the value they were receiving from granting stock options was equal to the expense. Moreover, this accounting change coincided with the crash in the stock markets and the concomitant blow to the legitimacy of stock options in the minds of Indian tech workers. Most companies decided that, at least at that point, the cost of granting stock options could not be justified, and many began to cut back or stop granting stock options. It is impossible to say whether Indian companies would have reacted in the same way had expensing not occurred, since the devaluation of stock options by employees was a powerful force. It seems plausible, however, that expensing entered into the calculus of corporate decision-makers.

My interviews also revealed that corporate decision-makers in India view stock options as primarily a way to retain key employees, rather than a benefit that is worthwhile providing to most or all of their employees. Although there are logical reasons for this approach, namely the amount of job-hopping of younger workers, this commonly accepted norm is different from the way stock options have become institutionalized in Silicon Valley. One of the primary components of the Silicon Valley organizational model was the liberal and broad use of stock options. Although options have always been more feasible in Silicon Valley because of the large number of startup companies, an important part of the philosophy has been that allowing all employees to share in the company's success through stock options is a key driver of innovation. The common philosophy regarding stock option grants among Indian managers appears to be somewhat different, namely that the primary use of stock option grants is to retain

the employees that are essential to the success of the organization. In addition, the grants that these employees receive need to be significant enough so that they will make a difference to the employees. As one informant noted, it is better to provide something of value to the people who really drive the value of the company, rather than give out "peanuts to everyone." Providing stock options to most or all employees as simply a way of doing things has yet to be institutionalized as a widely held belief among corporate managers in India. Once such norms become institutionalized, challenging and changing them becomes difficult, although not impossible. However, this does not mean that overall, Indian technology companies are somehow less egalitarian in how they compensate employees or organize work than American companies, a point to which I will return later. But, in terms of stock options, the common paradigm in India calls for more selective grants to employees the company considers to be key. It is important to note that Indian companies also tend to have fewer shares available to grant than their American counterparts and are thus constrained in how many shares they can give out. Also, Indian companies remain cautious in distributing stock options broadly because these plans remain new and their long-term effects appear uncertain. In addition, once granted, even if employees do not value stock options, it is difficult to take away the benefit.

Another force shaping the views of corporate decision-makers is that the collective knowledge level about stock option plan design and strategic approaches to it are only beginning to become more sophisticated. The lack of knowledge about has in part been shaped by the absence of important conduits of information about management practices, which will be discussed in the next section. The lack of knowledge has also helped generate a certain degree of caution among Indian companies in doling out many options to many employees. In addition, Indian companies have not devoted significant resources to educating employees about stock options. Many companies noted that employees are uninterested in learning about stock options, but one of my informants believed that this lack of commitment to education meant that employees, especially at the lower levels, "do not have a clue" about how stock options can be beneficial. Regardless, the lack of investment in stock option education has definitely contributed to a low level of knowledge and a lack of interest among employees. Like approaches to plan design, approaches to education appear to be only in the early stages, and this is a result of the newness of the practice and

the absence of certain informational channels through which ideas about business practices diffuse, rather than any lack of sophistication in the approach of Indian managers to compensation and strategic human resource management.

Organizational Field Level Forces

My interviews revealed that ESOs became a widely known concept among Indian technology companies during the mid-to-late 1990s, but due to employee attitudes about compensation, tight labor markets, and certain constraints faced by corporate managers, stock options were granted much more selectively within Indian companies. This section discusses some other forces that may have shaped why Indian companies used stock options differently. Arias and Guillen (1997) argue that existing studies on the cross-border transfer of organizational techniques have ignored the role of forces within the organizational field, i.e., the intermediary forces between organizational level and society level forces. This perspective also focuses attention on how information and ideas about management practices flow between two countries. Some of the most important channels through which information and ideas about organizational practices diffuse between two countries include cross border networks, multinational corporations, professional groups, international consulting firms, international NGOs, and the congruence between business elite mentalities in the two countries. There are some strong channels of information flow between India and the United States. Many Indian managers and engineers in the technology sector, for example, have spent time training and/or working in the United States, particularly Silicon Valley (Saxenian 2002). This is a key source of exposure to American models of management, such as employee stock options. In addition, the heavy volume of U.S. multinationals setting up operations in India was another key source of ideas and information about employee stock options.

However, certain cross-border information channels are missing or in early stages of development, and the absence of these forces may have contributed to the more selective use of employee stock options in India. One important conduit of knowledge about organizational practices, for example, is the professions. Groups of highly-skilled occupations that cohere collectively as a profession, e.g., lawyers and doctors, can play powerful roles in transmitting knowledge and shaping the types of practices

that organizations see as legitimate and adopt (DiMaggio & Powell 1983). A profession that plays a central role in defining and building legitimacy for compensation practices such as ESOs is the human resources profession, which encompasses those working in human resource or compensation and benefits roles within companies, as well as consultants that advise companies on these issues. In India, the HR profession is still in an early stage of professionalization. Few, if any, consulting firms in India have people strictly dedicated to compensation and benefits. Moreover, there are hardly any consulting firms that specialize in employee stock compensation. The low level of institutionalization of the human resources profession may have limited the amount of information available to corporate decision-makers about using employee stock options and different approaches to plan design. Human resource professionals within Indian companies, however, demonstrate a very high level of sophistication regarding strategic human resource management. Many informants use in-depth employee surveys to measure performance and attitudes. Although there are some strong informal networks between human resource professionals in different organizations, some informants indicated that they wish there were more formal opportunities to share ideas and information. One senior human resource executive noted that "we talk to each other, but we don't work with each other." This person was discussing the problems stemming from a lack of standardization of compensation and benefits among technology companies. This lack of standardization has contributed to the rapid escalation of cash compensation and enhanced the attraction of cash for employees. Since HR managers at different companies are not part of more cohesive professional networks, they have few opportunities to discuss and take collective action, such as trying to constrain the cutthroat competition for employees, which has let cash compensation "spiral out of control."

In addition to the professions, the state, international NGOs, and the media can also play a significant role in the diffusion of management practices and information about them. In India, as in the U.S., there no legal requirements that companies have to adopt ESOs or design them in certain ways. In addition, there are few Indian trade associations that act as conduits of information about these practices, with the exception of the National Association of Software and Service Companies (NASSCOM), which is a broader industry trade group. There are also no nonprofit organizations dedicated to providing

information and advocacy about employee stock options and related forms of equity compensation. Finally, although the Indian media has provided significant coverage of ESOs, some informants indicated that this coverage, particularly before the crash, tended to present a somewhat unrealistic image of stock options, such as portraying stock options as having no downside. There were also many sensationalist stories about the fewer lower level employees who made money off of stock options. The problem with this coverage, according to some of my informants, was that it created unrealistic expectations about stock options, which fueled the more widespread disillusionment with them once the markets crashed and the reality of the downside of stock options was exposed.

Finally, the absence of a vibrant startup sector in India may have also constrained the flow of knowledge about and the diffusion of ESOs. In the United States, startup technology companies have always been common and in fact have been the primary organizational form driving technological innovation. As discussed earlier, the low number of startups has restricted the number of large option payouts and constrained the legitimacy of the practice. The strong startup sector in Silicon Valley created strong cross-organizational networks, which acted as a key conduit in the broad diffusion of the Silicon Valley model generally and the broad diffusion of BSOs in Silicon Valley more specifically. The lack of a similar startup culture in India has most likely constrained information flow. One informant noted that Indian companies are focused outward towards these markets, rather than towards internal markets. Parthasarthy (2004) has described this as a low level of embeddedness within local markets, and it has most likely been a barrier to the transfer of knowledge about stock options and to the broader diffusion of the practice.

In this section, I have examined some of the ways in which the characteristics of the channels through which ideas and information about organizational practices move across and within borders have influenced how ESOs have been used in India. The presence of multinationals and the many connections between Indian knowledge workers and managers and the United States, were critical in the transference of the idea of employee stock options as a compensation mechanism. Due to the factors described in the previous two sections about employee attitudes towards stock options and organizational level pressures faced by managers, Indian companies appear to have adapted ESOs to the economic, social, and cultural

realities of India. The absence of some information channels at the field level, however, also restricted the flow of ideas about the possible uses and designs of employee stock options, and therefore may have contributed to certain caution in how Indian companies used this compensation mechanism. When the U.S. economy went into a tailspin, the emerging legitimacy of ESOs had a weak foundation on which to rely.

Looking to the Future

In assessing the future of compensation and the technology sector more generally in India, my interviews produced a diverse range of opinions, but some common themes emerged. In terms of the future use of stock options, most informants believed that cash would remain king for at least the next couple of years. In addition, there was a great deal of uncertainty about the effect that stock option expensing will have on the viability of continued grants. However, many also believed that employee stock options could become more common as the technology sector matures and companies move into even higher end production, increased specialization, and research and development. Some informants noted that India is on its way to becoming a center of innovation similar to Silicon Valley, although it faces serious obstacles to realizing this. As the Indian technology sector matures, companies will be under more intense pressure to retain their employees, especially those that have developed a crucial role in creating a company's products. In fact, many informants indicated that high attrition rates are already becoming a critical problem. As these needs increase, so might the use of stock options. In addition, as more of a company's employees become integral to the creation of knowledge capital, stock option grants may also become more broad-based. However, some noted that it is unlikely that all employee grants will become common. The common philosophical approach is to reward the key employees, and this appears to be a strong norm. While the companies may extend their stock option grants to all technical employees, granting to nontechnical, lower level employees may require a significant shift in management ideologies.

Some informants also noted that as the workforce ages, employees will be less willing to job hop, but will need longer-term incentives to stay and companies will begin to shift toward long-term benefits, such as stock options. However, others noted that although the current cohort of knowledge workers will

age, there will be a constant and perhaps expanding group of new knowledge workers emerging out of India's educational system. Hence, there will most likely always be a significant number of young, highly mobile employees for whom cash will be the most important thing. As labor market shortages continue and the focus remains on cash, salaries will continue to rise. This may hurt the competitive advantage that India has always offered, but it is important to emphasize that India now also competes on knowledge and products and expertise, not just on low wages. If companies begin to feel the strain of ever increasing cash compensation, however, they may take a more serious look at stock-based compensation.

It is also likely that broader field level forces will change over time. As the stock market grows and as the number of people investing in it grows, so will knowledge and comfort levels with the concept and perhaps the demand for stock options. As more people get stock options, knowledge and awareness will also increase. If companies take stock option education more seriously, employee attitudes about stock options will begin to change. HR as a field will become more sophisticated and professionalized, and dense professional networks will grow over time. The level of sophistication in India of approaches to compensation, benefits, and strategic human resource management more generally is impressive, but my sense was that the profession is still becoming established as a key player in strategic management. In addition, the consulting profession will likely continue to grow and acquire legitimacy, and the entry of multinational consulting firms may prove to be an important conduit for knowledge about BSOs.

Conclusion

This paper provides an in-depth view of how management practices move across borders and how they become institutionalized in different ways. This paper has shown that the transfer of such practices across borders is not a simple one, even between two nations that have developed strong network ties between similar industrial sectors, but a complex process shaped by forces operating at the individual, organizational, industry, field, and societal levels. The transfer of ESOs from the U.S. to India has not been one of simple imitation or rejection, but rather a transfer of ideas and information about ESOs, which were then adapted to local conditions. The lack of broad-based and significant wealth created by stock options has been a key reason why broad-based stock option plans have not diffused more broadly

among Indian software and IT companies. As one company that has probably the broadest and most significant grants noted "if the market had been up this whole time, we would have no problem hiring and retaining people because we have the best options program." However, my interviews revealed that there were other factors in operation, such as the allure of cash for employees in tight labor markets, general attitudes about the stock market and investing among both managers and employees, significant changes in the accounting treatment of stock options, lack of investment in stock option education by technology companies, and a cautionary approach to stock option plan design among Indian companies, in part due to the youth of the industry and the practice, but also due to the weakness of certain informational channels. As a few informants noted, India is just getting over the learning curve with stock options.

One of the issues of central interest to this paper is how the structure of compensation and the organization of work within the global technology sector differs from traditional systems of authority and wealth distribution in the contemporary corporation. Technology companies in the United States have, at least historically, used BSOs as a compensation mechanism to a much great extent than technology companies in India. However, technology companies in India do appear to be spreading the financial wealth generated by production in other ways, such as cash compensation, both fixed and variable, as well as other benefit plans and good working conditions. Many companies I interviewed emphasized the importance of "sharing the wealth, " and all the companies I interviewed indicated that they had variable pay programs for most of their technology workers. These programs provide employees with additional cash compensation for meeting individual, team, unit, and/or company performance targets. Indian companies are sharing the wealth with much broader groups of employees than nontech industries in India, but this is primarily accomplished through cash. In the US, this was primarily accomplished through stock options. The absolute gains in the US were much higher, but relatively, they may have been more or less equal, although it is important to note that stock ownership in general leads to more significant long-term wealth creation. My interviews also probed, on a smaller scale, authority systems in the Indian technology sector. Most informants described their organizational structure and culture as very open, flat, or lacking hierarchy. In this sense, they appear to be very similar to SV companies in the United States. However, it is important to emphasize that my informants were mostly in management

positions. Gaining a more detailed picture of the nature of existing systems of authority, the technical division of labor, and systems of work coordination would require extensive ethnographic and other types of research. One of my academic informants emphasized this as one of the most important research needs at this stage regarding technology work in India.

Although it appears that organizational practices that broaden the distribution of the wealth and authority (as compared to other industries) have become institutionalized within technology companies in both India and the U.S., the recent volatility in the stock market has made companies in India and, to a lesser extent the U.S., more wary of using stock to compensate employees. A long-term shift away from using stock as a form of compensation could have significant consequences for employees, innovation, productivity, and broader patterns of wealth distribution in both countries. Gaining a better understanding of the long-term causes, characteristics, and consequences of ESOs and the globalization of technology work more generally will require more extensive research based on detailed national and cross national data sets and that takes seriously the role of forces operating in the multiple environments in which organizations are embedded. This paper provides a starting point.

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