

WORKING PAPER SERIES

National Industrialization Strategies and Firm Level IR/HR Practices: Case Studies in Malaysia and Philippines

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Working Paper 94-07



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April 1994

Working Paper #94-07

<http://www.ilr.cornell.edu/cahrs>

Acknowledgements

My thanks to the School of Labor and Industrial Relations at the University of the Philippines, Dr. Rene Ofreneo, Dr. Bach Macaraya and Nanette Fernando, and to Prof. Rajah Rasiah of the National University of Malaysia for facilitating interviews. In addition, I thank Rehana Huq, Daniel G Gallagher, and Christopher L Erickson for comments on an earlier version of the paper. Errors, if any are mine. This research project was funded by a grant from the Center for Advanced Human Resource Studies at Cornell University. This paper has not undergone formal review or approval of the faculty of the ILR School. It is intended to make results of Center research, conferences, and projects available to others interested in human resource management in preliminary form to encourage discussion and suggestions.

Introduction

Any economy is characterized by several different patterns of industrial relations (IR) and human resource (HR) practices at the level of the workplace. Often, the patterns of IR/HR practices of firms differ based on the nature of the industry, the nature of technology and production methods used, the specific economic circumstances facing firms, and in some cases the IR/HR philosophy of key individuals. Patterns of IR/HR practices also differ based on economic sectors, with IR/HR practices in the service sector showing differences with patterns in the manufacturing sector.

In the context of the rapidly developing nations of Southeast Asia where labor human resource policies and practices have been identified as a critical element in their industrial success, (World Bank Research Report 1993), the national industrialization strategy has been shown to influence national level industrial relations and human resource practices to a considerable extent (1994a, 1994b). In this paper, I argue that different industrialization strategies also create distinct patterns of IR/HR practices at the level of the workplace, patterns that transcend sector, industrial, and firm level boundaries.

This argument is evaluated in Malaysia and the Philippines, which have followed an import substitution industrialization (ISI) strategy and an export oriented industrialization (EOI) strategy, common to several fast developing Asian countries (Kuruvilla 1994). The EOI strategy can be further subdivided into a first stage EOI based on the exports of cheap manufactured goods where the competitive advantage is cheap labor, while the second stage is based on higher value added manufactures using more highly skilled labor. Each industrialization strategy has emphasized the growth of certain types of industries and firms through various financial incentives and regulatory mechanisms, resulting in the growth of two different sectors in the economy, an inward looking ISI sector, and an outward looking EOI sector. If the argument is to be substantiated, the patterns of workplace IR/HR practices in these two sectors must be different, irrespective of the types of industries and firms in these sectors.

To evaluate this argument, I use a research design consisting of systematic pair-wise comparisons, using case studies of firms in banking, paint manufacturing, electronics, electrical, and tool and die making industries. Pair-wise comparisons offer the potential for isolating and clarifying similarities and differences across industrial relations systems, and in this paper, these comparisons are made at several levels. First, comparisons of workplace level IR/HR practices are made between the ISI and EOI sectors in each economy to evaluate the argument whether industrialization strategies have resulted in different patterns. Second, comparisons of ISI sector and EOI sectors are done across the two countries to evaluate whether the pattern of

differences found between ISI and EOI regimes is stable and consistent across both countries, i.e. are the results broadly generalizable?. For the argument to hold true, IR/HR practices in the ISI sector in both countries ought to be similar, while the patterns of IR/HR practices in the EOI sectors in both economies ought to be different from the ISI, but also different across the two countries given that they follow different EOI strategies (Malaysia follows a more advanced EOI strategy while the Philippines follows a simple EOI strategy based on low costs) .

Finally, the cases also permit comparisons of firms in specific industries across both sector and countries. This multiple level of comparisons include both comparison strategies of "most similar" and "most different" systems designs (Przeworski 1987) used in comparative political science, although the application of this technique to comparative industrial relations research is relatively rareⁱ .

INDUSTRIALIZATION STRATEGIES

As Kuruvilla (1994a, 1994b) has suggested, the industrialization strategies followed by Malaysia and the Philippines is consistent with the prevailing Southeast Asian stage-wise model consisting of three stages; an initial import substitution industrialization (ISI) stage, followed by a low cost export oriented industrialization (EOI) stage that capitalizes on the advantage of cheap labor, and then by more advanced EOI stage based on the exports of more skill intensive and capital goods.ⁱⁱ

Both Malaysia and Philippines adopted an ISI strategy in the 1950s. Given their inability to sustain a foreign exchange intensive import dependent ISI regime, both countries shifted to EOI. In Malaysia, this shift occurred in the 1970s, with the enactment of state policies to attract foreign investment in the electronics sector. A combination of cheap and compliant labor along with a considerable range of financial, fiscal, regulatory and infrastructural incentives resulted in the attraction of foreign capital in the electronics and electrical goods sectors of the economy (see Salih, Young, and Rajah 1988, Spinanger 1986). In the late 1980s, given the influence of rapid technological change, globalization of products and markets, increased competition from other low cost Asian exporters, and a labor shortage arising from the inflow of foreign firms, the government articulated a more advanced EOI strategy focusing on attraction of firms exporting higher value added manufactures in electronics and electricals, based on more skilled labor (Rajah 1993, Kuruvilla 1994).

In the case of the Philippines, repeated foreign exchange crises in the 1960s led the World Bank to recommend the adoption of EOI strategies consequent to its stabilization loans to the country. However, given the disagreement between local capitalists in the imports sector and those who profited from exports, a full scale EOI program was not implemented until the

martial law period in 1972 (Bello and Verzola 1993). The EOI program was intensified under the World Bank sponsored structural adjustment in 1983 (see Villegas 1988, Ofreneo 1994 for a more specific discussion of the policies enacted to boost exports), and has continued since then under the Aquino and Ramos administrations. While the Philippines is in the stage of export orientation characterized by the export of low cost labor intensive manufactures for export financed by foreign investment, Malaysia, has is transforming from the low cost EOI stage to a more advanced EOI characterized by the exports of more technology intensive products, coupled with some level of industrial deepening.

The results of the adoption of EOI regimes can be seen in three key indicators in both economies, listed in Table 1. First in both economies, the relative share of industry in GDP has increased since the 1960s, although the increase has been much sharper in Malaysia than in the Philippines. Second, in both countries, the contribution of exports to total GDP has increased steadily, while the contribution of manufacturing exports to total exports in both countries has increased dramatically. The success of the EOI regime is also evident in the consistently high economic growth rates in Malaysia, while economic growth rates in the Philippines have been less impressive, showing both sharp rises and declines.

-Insert Table 1 about here-

The industrialization strategies have created in both economies two distinct economic sectors, the import substitution sector and the export oriented sector. Although it is difficult to estimate the relative size of these two sectors in the economy given the absence of any systematic data collection by the governments, the sectors operate under different rules and are characterized by different industries and firms.

The export sectors in both economies are typically characterized by foreign multinationals and firms producing manufactured goods, primarily in the electrical and electronic industries, but also in small manufactures and textiles. Given that government policy encourages exports, these firms are the target of numerous financial, fiscal, and regulatory incentives, such as the provision of cheap land and utilities, exemption from corporate taxes, exemptions from labor legislation, and several developmental and infrastructural rebates. Although the policies in both countries offer a similar package of benefits to foreign investors, one key difference is that Malaysia has restructured its investment incentives since 1988 to attract higher technology and skill incentive firms, with specific incentives for setting up advanced research and development facilities. In addition, Malaysia has also restructured its

education sector and enacted policies for skills development to provide the highly skilled manpower that higher technology industries require. In both countries, firms in the EOI sector are foreign owned, competing in international markets, with their economic circumstances depending largely on international market conditions. Most foreign firms export 100% of their production, and in both countries, have relatively little local linkages, with the exception of subcontracting arrangements. The EOI sector is typically smaller than the ISI sector, although it is growing at a more rapid pace, and estimates suggest that this sector may account for 20-25% of employment in both economies.

The ISI sector on the other hand, is larger, and typically consists of large state and private owned industries operating in core sectors such as utilities, transportation, communications, airlines, as well as in the manufacture of consumer and industrial goods. These industries are largely protected from foreign competition in both countries, although exposed to some degree of domestic competition. Several of them are monopolistic firms owned and operated by the government in both countries. The economic conditions of these industries are largely locally determined, with international market forces having a relatively smaller impact. In the Philippines, the ISI sector has witnessed severe declines in the last decade, given government policies that support an export oriented regime-- for example-- the several devaluations in the Philippine peso during the 1980s raised the costs of foreign exchange needed for ISI industries to import technology needed for production, and the decade of the 1980s witnessed a closure of more than 7000 ISI firms, resulting in a serious deindustrialization of this sector (Villegas 1988). In Malaysia, however, the ISI sector has also grown as a result of government policies encouraging industrial deepening to accompany the dramatic export performance. The case studies that follow are drawn from both ISI and EOI sectors in both economies, permitting both a within country and between country sector wise comparison of IR/HR practices.

CASE STUDIES OF FIRMS IN MALAYSIA AND PHILIPPINES

The cases are drawn from a variety of industries in each sector economic sector. In the ISI Sector, domestically owned firms in the banking and paint manufacturing industries were chosen in both economies to examine patterns in both blue collar and white collar industries. In the EOI sector, firms from industries such as electronics, tool and die making, and banking were chosen. Given the predominance of electronic firms in the EOI sectors of both countries, my sample is also biased towards electronics firms. The cases are discussed in more detail below. The IR/HR practices are also summarized in Tables 2 and 3.

ISI Sector firms in Philippines

DUTCH BOY PAINTS : Dutch Boy Paints, the largest manufacturer of commercial and industrial paints in the Philippines, is a 40 year old company currently owned by a local consortia and Jensen and Nicholson, an international paint manufacturer, with technical collaborations with leading paint companies such as Ameron (USA), Stollack (Austria) and Standox (Germany). Employing about 324 workers in its factory in Makati, Manila, it produces industrial and domestic paints for the Filipino market. The oldest paint manufacturer in the country, it enjoys a reputation for technological leadership and high quality paints.

The market for industrial and decorative paints (which accounts for 80% of their production) is highly price sensitive. There are over 70 competitors, mostly smaller manufacturers, with lower overheads competing on the basis of price at the low end of the market, although two bigger firms, Boysen paints (established 1974) and Charter Chemicals (established 1976) are competitors (The Paint Authority, 1993). Dutch Boy's competitive strategy has always been predicated on its reputation for quality, rather than on price. This focus has continued even through the increased competition in a price sensitive environment of the 1980s, resulting in some losses in market share in recent years. For example, from a high market share of 60% in 1960s, Dutch Boy accounts currently for 20% of the market. Boysen paints, a Chinese owned firm whose competitive strategy focuses on price, has increased its market share from 0 in 1974 to 40% in 1993. In terms of profitability, Boysen reports profits of 20% on sales, while the figures for Dutchboy are less impressive, at 2.5% of total sales of Peso 705 million. Boysen paints annual turnover of pesos 1.2 billion is accomplished with only 175 employees roughly one half of Dutchboy's labor force. In addition, delivery times (time between order and delivery), a critical indicator of efficiency, in Boysen is 1 hour, while 4.5 hours in the case of Dutch Boy. Accounts receivables, another important indicator of a firms financial strength, is 120 days in Boysen, while only 60 days in Dutch Boy.

Dutch Boy Paints' complacency in its business strategy is reflected in its human resource practices as well. Given the complex (1000 different product lines) continuous process technology the company has made little effort to increase skills of workers or change work organization practices over the last 40 years. Training is largely job specific, with little effort to broaden workers skills and job classifications. The firms compensation strategy is based on a market leadership principle, pays the best wages in the market, but is largely rigid, with fixed pay scales and increments negotiated with the union, a variable bonus that is guaranteed to all workers and with only 3% (out of total increases of 12% in 1992-93) based on merit. There are no productivity linked or skill acquisition based incentives in the compensation system.

The firm boasts of a long and collaborative relationship with the union, where negotiations are carried out by the Company's President and the union leaders. The negotiations are generally cordial, with the last long term agreement being signed in five 4 hour sittings, which is extremely fast by Philippine standards. The approach to employment and industrial relations is largely paternalistic. Dutch Boy prides itself on being a family oriented company employing husbands and wives , and in some cases, even children in the firm. There has never been a strike, and the grievance system has never been used even once since its inception in 1960. In the words of the Personnel Manager "if the workers demands are genuine, we agree to them". While 1/5th of the production requirements are met by overtime, during periods of low production, the firms ability to be flexible is constrained by its no layoff policy.

Given the decreases in market share, the business strategy has been to emphasize quality of both production and service, and to reduce costs by investing in a technologically advanced equipment in a new factory that is being built in a lower cost location in the Philippines. However, the company does not plan to alter its human resource practices in any way in the new plant.

INTERBANK: Interbank was the 18th largest commercial bank in the Philippines, with over 55 branches. Formerly owned by American Express, it has recently agreed to merge with Union Bank of the Philippines, making it one of the largest Filipino banks. Although the banking industry was highly regulated, with certain banks operating in certain sectors, deregulation of the industry in 1989 has created universal banks (unibanks) that can operate throughout the economy which has resulted in an explosion of new branches as bigger players get into rural markets. For Interbank-Union Bank, deregulation presents a growth opportunity in an increasingly competitive market. Interbank now has 1200 employees, of which 33 are managers, 300 are junior officers, and the rest are rank and file, which includes the different clerical positions as well as the indirect staff such as messengers, security officers and drivers.

The Bank's human resource policies and practices evidence some degree of paternalism, although basic conditions are comparable to other banks given that the banking industry is unionized in the Philippines. Its compensation strategy is predicated on being a market leader, and the union suggests, based on salary levels, that it is the best paying domestic bank. The compensation system is relatively straightforward, based on a salary scale with increases in the scale discussed with the union. During the last bargaining round, the agreement for a three year contract was a 25% wage increase during the first year, with lump sum payments in the following two years. Employees are also paid 4 months wages as bonuses, during the year (statutory, anniversary, Christmas, and mid year), although none of

these payments are tied to productivity or performance, and few banks offer such a range of guaranteed bonuses. Its benefits are also better than most other banks, and is the only bank with paid paternity leave as well as assistance for funerals of relatives of employees.

In terms of work organization and training, the practices reflect a Tayloristic approach that is consistent with policies of most domestic banking firms that were interviewed. The bank does not have a policy of job rotation and skills development. Movement within the organization can occur only vertically through promotions. The predominant type of training is to increase job related skills. The average tenure is 9 years (for a fifteen year old bank), although the increase in demand for tellers post deregulation in the Philippine banking industry is being felt with turnover rates increasing to about 6-7% currently.

The bank's paternalistic human resource strategy is also due to the personnel philosophy of the President (who claims that if people are treated well in terms of pay and benefits, there will not be any problem. The bank has a no layoff policy, eschews overtime and other flexibility enhancing mechanisms available to the industry such as subcontracting and retrenchment. The bank's response to the increasingly competitive environment has been to increase automation rather than to decrease employment.

The company and the Interbank Corporation Bank Employees Union, have a cordial collective bargaining relationship in a heavily unionized banking industry. The bargaining relationship is about 10 years old, with three long term agreements having been entered into without a strike. Labor Management relationships have steadily grown better through institutional procedures such as formal labor management committees, and regular briefing meetings with the union called 'situationers'. While the subjects discussed are mostly with regard to issues of discipline and welfare, the company also informs the union of the broad financial trends and performance of the bank. The union has specifically requested that it not be drawn into the labor management committee, although it monitors the activities with a view to making sure that subjects that fall under the bargaining domain are not discussed in the committees. In addition, the union does not see the new emphasis on quality circles as a threat to its existence. No significant bargaining regarding job assignments takes place, and since the bank pays above the market wage, wage bargaining is relatively dispute free.

EOI Sector Firms in Philippines

UNIDEN: Japanese owned UNIDEN makes CB radios, web pagers, web scanners, satellite receivers, and other electronic accessories in its Philippine operations for export to North America and Australia. This case study is of one of their two plants, employing 4300 workers and making printed circuit boards for use in various electronic products.

UNIDEN is known as a supplier of cheap electronic products, positioned at the lower end of the market. Their competitive strategy has focused on low costs, and their products such as CB radios and answering machines are the cheapest in the U.S. market. Rising labor costs in their factories in Taiwan, and S. Korea forced them to move operations in 1987 to lower cost areas such (South China and the Philippines). Consistent with Japanese Pan Asia production strategies common in other industries (see Kuruvilla and Pagnucco 1994), design and product development of electronic products are done in Japan, while marketing is done in individual countries by local workforces.

Their human resource strategies tend to mirror the low cost business strategy of the company. The plant employees primarily young women operatives between the ages of 18-22, and who are paid 60% of the wages of male workers in the industry (Pineda Ofreneo 1988). Material handling jobs are also performed mostly by women, although few women can be seen in line leader or supervisory jobs.

Work organization is based on a Tayloristic assembly line principle. Each operator looks after several machines in a production line, and line leaders and assistant line leaders are responsible for material supply and inspection. Workers are not trained or allowed to attend to machine breakdowns, which are left to engineering staff. The training is job specific, and done on the job. The Personnel manager suggests that "it is not the policy of this company to have multi skilled workers, and transfers across operations are only initiated where there is a vacancy in one department or line and a surplus in the other. By and large, a worker in one department and one line remains with the line until she gets promoted out of it or leaves".

UNIDEN's compensation strategy matches its low cost business strategy. Although the personnel manager claims to be in the 75th percentile of compensation in the industry, my comparison with other international electronics firms suggest a compensation strategy suggestive of the market follower. Operators with at least two years experience are paid 165 pesos per 8 hours, which is only 7% above the minimum wage of 154 pesos per day in Metro Manila, in contrast to the industry leader Motorola, whose average wages are approximately 25-40% higher than the minimum wage in Metro Manila. In addition, the wage system is rigid, based on a fixed scale, with guaranteed annual increments, no production incentives and no merit related increases.

The company is nonunion. The company's personnel policies state that they prefer to deal directly with their employees and not have "third parties such as unions interfering with the relationship with their employees". UNIDEN has been the target of several organizing drives since 1987. In 1988, the company successfully argued unfair labor practices (noncompliance of

certification procedures) after a union victory in the representation elections. Following the reinstatement of a suspended union activist in 1991 (after a series of wildcat strikes), a second certification election was held. In this election over 10 different labor federations contested the election, resulting in no union winning the required 30% of the vote. Although the company believes that its employees do not want unions, only 20 percent of the workers voted for the nonunion option. Interviews with workers however indicate that the company pursues active union suppression strategies.

The primary method of increasing employment flexibility is through the use of contract and casual labor in its indirect operations. At the current time, there were about 500 contract workers in the plant, working jobs such as staff canteen, security and materials handling. Contract workers are paid at the minimum wage. The relatively short tenure rates (average 2 years) and the high rates of labor turnover (30%) appear to be a consequence of UNIDEN's low cost employment practices, suggests several workers.

There is relatively little new investment planned in this factory, despite the rapid change in automation in the semiconductor industry. A significantly larger part of UNIDEN's investment go to their factory in South China, where wages are lower, and there are relatively fewer labor standards legislation. Additional investment in the Philippines is planned at a lower cost area outside Metro Manila.

MOTOROLA : Motorola's Philippine operations commenced in 1979, involving the assembly and testing of integrated circuits. The production technology is at the low end of semiconductor manufacture, including wirebonding and molding, and testing, in contrast to Motorola's Malaysian operations, which are considerably more advanced, including both wafer fabrication, and some research and development. The plant employs about 2000 operators, and currently produces 10 million IC's a week, and in peak periods can produce as much as 15 million IC's per week. 100% of its production is exported back to Motorola in the U.S. Motorola is well known in the electronics sector for its high quality products and innovations in production organization and people involvement, and its human resource strategies in the Philippine operations are consistent with the Motorola approach worldwide.

Work organization currently reflects MOTOROLA's worldwide system, with fully automated production systems. The work allocation of an operator involves the monitoring of automated production lines, mostly via computer terminals. All operatives are trained in autonomous maintenance and trouble shooting, and autonomous maintenance has resulted in reducing machine down times by 60% since it was introduced in 1991.

This form of work organization is supported by two features, training and teamwork. Training is comprehensively viewed, with employees exposed to skill training, production, quality, maintenance and parts management, trouble shooting, as well as communication and personality skills. Motorola's corporate policy ensures that every employee receives a minimum of 40hrs of training per year, in order to facilitate meeting the company's policy of multiskilling. Under the multiskilling policy, each operative must know at least three jobs at the same hierarchy and one job at the higher level. At any given time, each worker trainer (the highest job in the worker hierarchy) will be training at least 10 workers, working on a schedule that covers the entire workforce. From the employee's point of view, he or she can expect to learn one new skill every six months until two years have elapsed, when he or she gets promoted to the next level.

In terms of teamwork, Motorola uses both structured and autonomous teams. Structured teams include straight line teams that are part of one production line and one department, as well as interactive teams that are comprised of different people to solve different kinds of problems. For example, in straightline teams in the wirebonding department, are comprised of both horizontal teams (workers in different shifts) as well as vertical teams (workers in different job hierarchies) including both the supervisor and ending with a material handler. The team becomes an interdisciplinary team when engineers and technicians in quality assurance and inspectors are added. Each team meets for one hour a week on production time, but also meets outside the production time where they are paid overtime if the team leader feels that it is necessary. More recently fully autonomous work teams have been introduced in some departments, where the team takes full responsibility for recruitment, training, and production management, and performance appraisal. The team has been successful in winning many international Motorola competitions organized in the USA and have received prizes for two consecutive years.

Employee involvement is further enhanced by a suggestion scheme which includes small rewards (200 pesos) for accepted suggestions, and larger rewards after the implementation of the suggestion. The number of suggestions have been increasing steadily, from 322 (half implemented) in 1987 when the scheme was introduced to 1500 in 1992 and 1622 in 1993 (of which 1074 were proved to be valid and implementable, and of which 554 had been implemented already).

Motorola's compensation strategy and performance appraisal systems are linked to the concept of teamwork and multiskilling. In terms of compensation strategy, Motorola positions itself at the top of the market in terms of wages and salaries, and their pay rates (and more

importantly, benefits) are on average, 20% higher than market rates, with equal pay for males and females. A significant benefit not found in other electronics companies is that Motorola pays all the tuition expenses of employees who want to invest in education during their off hours.

The compensation system is flexible, with about 50% of earnings devoted to performance and productivity, and this part may increase or decrease according to plant performance. Wage increases are tied to both the cost of living as well as the performance of the employee and the employee's department, based on the performance appraisal system. 95% of the factors involved in performance appraisal are objective in nature and records exist, so it is easy to monitor. When workers do jobs at higher skill levels, they get an additional 15% of pay for the time worked, and a performance linked mid year bonus based on plant output and quality yield. An individual can increase his or her annual earnings by as much as 30% by extra performance.

In terms of employment and flexibility, average turnover rates is less than 2%. Peaks and lows in production are met by overtime and redeployment. In the 1985-86 recession in the electronics industry, a program was developed in consultation with workers. Initially, they schedules annual leave, then went onto single day layoffs, worksharing and shorter workweeks. Finally they started a voluntary retirement system with retrenchment compensation, three months pay and a commitment to rehire. 300 workers accepted voluntary retirement of which 150 were rehired. The consultative manner in which this decision was taken has been much talked about by the workers, given the massive layoffs at other electronics firms.

Motorola is not unionized. Apart from unsuccessful organizing drives in 1982 and 1984, there have been no attempts to organize. Communications between management and workers are highly structured, with policy stipulating that managers must spend two hours a week talking with employees, and the grievance procedure has never been formally used. Although Motorola's investment plans to open another factory in the Philippines, it has directed more of its higher technology investment into Malaysia. Although Philippines has the advantage of educated workers and there is a labor shortage in Malaysia, the poor quality of infrastructure (transport, power, and communications) relative to Malaysia hampers expansion plans in the Philippines.

CITIBANK: Citibank employs 1000 employees and while its competitors in the domestic market are other Philippine banks, in the foreign exchange sector, it is the largest and most profitable foreign bank. Citibank has positioned itself as the one bank in the Philippines with the global reach. Therefore, Citibank sells itself as an outward looking bank and hence, its business

strategy and consequently human resource strategies are dependent on what happens internationally rather than locally.

Consistent with its worldwide human resource practices, Citibank has multiskilling and job rotation for all employees. Recruiting from the best schools in the Philippines at entry level, the new recruits are generally trained OJT. However, they also attend a number of technical courses such as trade financing, computer skills, and customer service seminars to enhance their skills. For a teller position, where there are four job grades, the skills required for each job grade is determined, and movement up job grades are based on such skill acquisition, although there is a minimum time limit at each job grade. For example, a teller must have stayed at least 2 years at the level 9, the lowest teller level, before moving to level 10. However, for each level 10 that is mastered while at level 9, pay is increased.

While the bank follows a market follower compensation strategy (Citibank positions itself at the bottom of the foreign banks and at 75% of the local banks), its range of non cash benefits are amongst the best in the industry. The compensation system is tied substantially to the acquisition of new skills, where a maximum of 10-25% of the salary increases are for skill development. The rest of the compensation package is relatively fixed, but includes bonuses for attendance and good performance. While the increases in salary levels are bargained with the union, the job scales for each grade are not known to the union.

In terms of workplace flexibility, Citibank follows an aggressive policy of subcontracting. As far as possible, all indirect jobs are contracted out. Currently, indirect jobs such as security, messengers, janitors, and computer processing. Earlier, even librarians, computer processing operatives and drivers jobs were also contracted out, but following a successful dispute raised by the union, these jobs have been moved in-house. Currently, contracting out is still viewed as essential to keeping payroll costs low, and most credit card operations, including processing of applications, reference checks and liquidity checks are contracted out currently. Such contracting out is consistent with Citibank practices in the U.S.

One recent innovation is the hiring of Chinese speaking clerks to develop the Chinese side of the business given that the Filipino Chinese community is far more wealthier and controls most of the trade and industry in the Philippines. Citibanks' employees have an in-house union affiliated to the National Association of Bank Unions. The relationship, which was conflictual in the early 1980s has become more cooperative recently, partly on account of an institutionalized exchange of information once a month, and largely because of a festering dispute regarding the use of contract labor for computer programming, driving and security employees was decided in favor of the union by the labor courts. A formal labor management

cooperation committee consistent with labor law exists, although the union has viewed the institution of the committee with some degree of suspicion and has refused to participate formally. The union is involved in the job evaluation committee, but their role is restricted to that of monitoring rather than direct participation.

Matsushita Communications MCP: MCP is a wholly owned subsidiary of Matsushita Communication Industrial Company (Japan), Matsushita Electric Industrial Co (Japan) and Matsushita Electrical Philippines Corporation (MEPCO), Philippines. MCP started its operations in 1988 in the Philippines and produces floppy disk drives, electric condenser microphones, hand free microphones, and closed circuit video cameras and monitors for export. MCP accounts for over 2% of the Philippines total export earnings. We focus here on one of its factories in Metro Manila, employing 2832 workers.

Consistent with the prevailing Japanese practice in the electronics industry in S.E. Asia (see Salih et al. 1988), Matsushita does most of the research and development in Japan, its medium end production in Malaysia, while the Philippines operations focus on low end production. Production processes and work organization follow the Matsushita model in Japan. Japanese managers spend five year stints as advisers in each department, and are responsible for training and implementation of production techniques. All engineers are sent to Japan for training. The chief executive officer is Japanese.

Although the production focuses on the assembly and testing of microphones, a significant part of the assembly line has been automated and robotocized, although the extent is limited compared to Matsushita's Malaysian operations. The assembly lines are mostly automated with the workers primarily monitoring the output and clearing stoppages. In case of major breakdowns, maintenance is done by engineering departments on request by the supervisor. Automation and rationalization of production processes over the last five years have contributed to dramatic increases in labor productivity, which is 2.71 times higher than it was in 1988.

The work is organized around the individual workers with specified job responsibilities who are also part of teams. The team leader, who supervises about 10 people in a horizontal team, reports to the supervisor, who supervises about 20 teams or 200 people. Within each sub process (e.g., amplifier block, building diaphragms, or microphone assembly), different patterns of job assignments are in evidence.

Training is largely done on the job by worker trainers, and the worker is then rotated across all the jobs in the department. Promotions to line leader and worker trainer are based on

skills acquired, and "soft" skills such as personal development and supervision are emphasized at these levels. All workers are also now being trained in the use of robotic technology.

The compensation system is based on a simple salary scale, which begins at about 3900 pesos per month (more than double the minimum wage of 1875 pesos per month). Wage increases are based on regular increments in the scale with one mid year bonus that is based on overall firm performance. The compensation is based on a detailed job classification system that is organized around knowledge, skills, both mental and physical, with different weights for different jobs.

The union is an in-house union affiliated to the Federation of Democratic Trade Unions. Labor management relationship have been cordial, through an institutionalized labor management cooperation scheme, and regular meetings with management once a week. Grievances are small in number, averaging 5 per quarter. There has never been a strike in Matsushita, which enjoys a very positive reputation as being a fair employer in the local region.

In terms of employment flexibility, the company uses a variety of practices including cutting shifts, transfer of employees to other departments, and having workers schedule their annual vacations during economic downturns. Although the company made extensive use of casual and temporary workers, this has been a source of conflict with the union, and in 1993, at least 1000 casual workers were regularized. There has been one retrenchment in 1984, where 40% of the employees were retrenched, but were rehired in 1986.

The bulk of Matsushita's expansion in Southeast Asia has gone to Malaysia, where it has three large factories and is scheduled to invest more in higher end production in Malaysia in 1994. The Philippines operations do not see much potential for expansion.

ISI Sector Firms in Malaysia

Jotun Corro-Coat (JCC): JCC Malaysia was established as an associate of Jotun International of Norway, a world leader in the manufacture and sale of powder coatings in the paint industry. JCC Malaysia has been operating for 9 years, and the factory employs 120 workers. JCC is the market leader for powdered paint in Malaysia, having been the only manufacturer in Malaysia for seven years, and commands an impressive 75% of the market share. Three other powder coatings manufacturers exist, all joint ventures with big international business houses. These three competitors have between them 25% of the market. JCC, with its long standing reputation for quality (technical assistance from Jotun International) and high market share does not view the competition as a serious threat.

Given that powder coatings are superior to regular paint on account of it being noncorrosive, non toxic, and lead free, it is the preferred paint used by electronic manufacturers,

which has been the fastest growing and largest industry in Malaysia over the last decade. JCC thus has faced a constantly expanding market for its products since its establishment (the electronics industry has been growing in excess of 10 % per annum over the last 10 years. The future for JCC looks bright, and all of its output is sold within Malaysia, although much of its rawmaterials are imported. It is a key ISI industry. Faced with a stable economic environment, Jotun management seems complacent about its future.

In terms of work organization, the job classifications are relatively rigid and workers have little control over the machinery since their work is governed by machine cycles in the continuous process technology that is used. However, monthly production targets are discussed and agreed to with the local union, which is affiliated to the National Union of Petroleum and Chemical Industry workers.

JCC's compensation strategy of being the best paymaster in the paint industry is closely tied to its need to attract and retain skilled workers in a labor shortage economy. The compensation system is simple, with defined scales, defined annual increments, and annual bonuses irrespective of the financial performance of the plant. Merit based increases are also given, although the quantum of such increases are specified in the collective bargaining contract. The only flexible component of the pay system is a fixed production bonus based on every additional ton of powder coatings produced over the negotiated workload (it was 300 tons under this agreement). This bonus is rather meager, and paid by a voucher for 200 RM redeemable at specified local supermarkets. In addition, there is an attendance incentive scheme. The compensation system is therefore quite rigid, with management having little flexibility to negotiate the rates of pay up or down and the bonus payment constitutes an additional rigidity.

While most training is done OJT, technical skill development and computer skills are taught outside in government training institutes and skill development centers. Job related skills are the focus of the training and the company believes that workers are not capable of being trained to attend to breakdowns in the highly complex and expensive machinery, which are handled by maintenance engineers. The management however admits that there is an absence of outside agencies that can help increase intellectual skills of its workers in the area.

Labor turnover at JCC has been rather low, less than 3% annually, which is something of a record given the labor shortage of skilled operatives in Malaysia, but this is largely attributed to the market leading compensation strategy adopted by JCC. Internal flexibility requirements are met by the use of overtime. This permits maintenance of a leaner workforce and providing workers with increased earning capacity. Working four hours overtime is routine.

Industrial relations is collaborative, with significant safeguards in the contract against retrenchment, although the management argues that retrenchment is a moot issue given that demand for JCC's products have never decreased. The length of the current long term agreement (40-50 pages of closely typed print) is unusual in Malaysian industry and a testament to the bargaining power of the union. The agreement is specific regarding the co-decision-making powers of the management and union in a number of specific areas and issues, and promotions also form a subject of negotiation. In general, human resource practices in JCC reflect considerable union influence in decision-making, and in relative terms, has significant restrictions on employer discretion on many issues. The management suggests that its privileged market position has allowed it to make concessions that it would otherwise not have made to the union.

Perwira Habib Bank (PHB): A privately owned commercial bank, PHB is one of the largest commercial banks in Malaysia, employing 50933 employees with 1125 branches. Given the economic growth rates of Malaysia, PHB is experiencing a period of intensive growth, with the number of branches increasing by 7% every year over the last six years. Profitability rates have also showed steady increases, between 1991 and 1992, profitability per employee rose by 12%.

Given that the banking industry is heavily unionized in Malaysia, with separate unions for clerical and junior officers (affiliated to the National Union of Bank Employees) and for officers (affiliated to the Association of Bank Officers), most human resource management issues such as compensation are common across the industry. The officers unions are pretty much in house unions. Collective bargaining is centralized, with the two unions negotiating with the MCBA (The Malaysian Commercial Banks Association). Each agreement is for a period of three years, although the agreement does permit individual banks to sign separate memorandums of understanding. Given that banks are defined as "essential industries", strikes are not permitted.

While compensation practices are common across all banks given the collective bargaining agreement, there is considerable variation in training practices across banks. In PHB, training is primarily done for skill enhancement and is provided on the job. Like all banks, PHB also has its own banking school or training center, with a staff of 15 training officers. Although the Malaysian central bank has promulgated rules mandating that each bank must spend 2.5% of the annual wage and salary costs on employee training, PHB has consistently exceeded that target, spending roughly 4.5% of its wage bill on training activities. Apart from the mandated salary, PHB also provides an annual bonus of two month's pay, while the officers get a profit sharing scheme.

However, given that growth in manufacturing has been greater than the growth in the service industry, the bank has been losing its lower level clerical employees to manufacturing due to the higher salaries caused by labor shortages. Turnover rates of 5-6% annually are common in the banking industry, a rate that is extremely high given the labor shortage in Malaysia.

In terms of employment flexibility, the strong unionization does not permit layoffs or retrenchments in case of economic down turns. In addition, given that the Malaysian central bank will not allow any bank to go under, there is a level of complacency about human resource and administrative costs that was not evident in the manufacturing industry. In case of economic downturns, the banks response has been to lower administrative costs. Of late, there has been a trend towards increased temporary employment during peak periods, but this is unlikely to continue given the difficulty of getting people on account of the labor shortages in Malaysia. The only long term response that increases flexibility is the trend in terms of increased automation in the banking industry worldwide, and PHB is at the forefront of the automation movement in Malaysia, having adopted an automated service center concept.

Labor relations in PHB has been cordial. There have been no strikes or industrial disputes during the last five years. There is very little interaction between union and management on a day to day basis, given that most negotiations are done on a central level.

EOI Sector Firms in Malaysia

MATTEL TOOLS: Mattel Tools is fully owned subsidiary of Mattel Inc, an American toy manufacturer noted for its toys such as Barbie Dolls and other plastic toys. Mattel Tools, set up 7 years ago in Penang, makes plastic and diecast molds for toys. The escalation of labor costs in Hong Kong, where Mattel has another tool and die factory has also brought increased business to Mattel Tools in Malaysia. Production of casts and mould have increased steadily from 480 in 1988 to about 550 in 1993.

The technology used in Mattel Tools is acclaimed as state of the art. CAD/CAM is used to design patterns for molds. The mold pattern is made by highly skilled pattern makers, using the latest grinding and milling equipment. All of the operations, whether it is cutting, grinding, or bench-fitting are highly skilled jobs requiring intensive training and experience in tool and die making.

Mattel's human resource policies reflect the need for attracting and retaining highly skilled workers. In terms of training, the skills for the low end operations such as lathe milling and grinding, are locally available. However, tool and die making skills have to be developed, given the absence of skills in tool and die making in Malaysia. Given the high turnover (3-4X per

month!) in skilled tool and die-makers (whose skills are required in almost every manufacturing industry) continuous training is paramount, and shortages are met by importation of skilled workers from India. Mattel runs its own training center and in collaboration with the Penang Skills Development center, has instituted a five year technical training program for tool and die makers, involving two years of schooling and three years on the job.

Mattel's compensation strategy is geared to retention of skilled workers, especially given its high training costs in training tool and die makers. The compensation system is flexible, with a fixed salary and annual increments tied to inflation, and a variable portion of pay based on a series of production incentives and merit based incentives. Merit increases are also given at the discretion of the management. In addition, there are a number of different incentive schemes. Roughly 40% of total pay is flexible.

Flexibility is important, given that toys are a luxury good and therefore extremely sensitive to changes in economic conditions. In order to enhance workplace flexibility, several strategies are used. Apart from high levels of daily overtime (exceeding three hours every day), the company makes extensive use of vocational trainees. These are industrial trainees under a centralized apprenticeship program run by the government, where they are apprenticed to industry for 10 months. These trainees get paid a small stipend but are used by the company to do a lot of the low skill material handling work. At any given time there are 12-24 people at the plant, which corresponds to more than 12.5% of the workforce. In periods of recession, the trainees contracts are terminated.

Mattel also uses subcontracting extensively. About 30% of the total production is subcontracted, both locally and internationally in India. Mattel has several vendor development programs to develop subcontractors, which allow them to not only reduce costs of productions (subcontractors production is roughly 1/3rd of Mattel's in house costs) but allows Mattel to operate a JIT system that also reduces inventory carrying costs.

The employees are not unionized. Although one attempt was made five years ago, management "cracked down" on the key workers, who were fired. Since then, there have not been any unionization attempts, and the progressive personnel policies such as high wages, very good benefits, and the creation of an open communications by a new personnel and human resource development manager has contributed to increased cooperation between management and workers. Mattel is a good example of a lean organization that follows a highly flexible human resource management approach.

X Semiconductors: X semiconductor, a subsidiary of a well known European semiconductor manufacturer, is one of the oldest foreign owned semiconductor firms in Malaysia, employs

1000 employees, and is engaged in the assembly and testing of semiconductors. The firm has recently expanded its operations in Malaysia, in large part due to the private sector and local government cooperation in setting up the Penang Skills Development Center, which provides training facilities, but also an opportunity for corporations to learn from each other and demand the specific kind of training that they required. A market leader in the European market, its manufacturing establishment in Malaysia demonstrates the state of the art in electronics manufacturing, and its human resource policies reflect the high skills based production system that is used.

Work organization is based on teamwork in a highly flexible production system. Each operative is trained in several horizontal tasks consistent with the multiskilling policy of the company. In terms of more vertical tasks, the worker not only solves production and minor maintenance problems, but also sets up machinery, including programming the relevant software, uses statistical quality control to monitor yield and inventory, and attempts process improvements. In the teams, the team leader doubles up as the supervisor. Teams are largely horizontal, although vertical teams are formed as and when the need arises. The compensation strategy of the company is that of a market follower, and pays the market rates for operatives. However, at least 40% of the compensation package is tied to skill acquisition, and both individual and team based production incentives. Although annual wage increases based on the cost of living are provided to everybody, merit determines increases above the increases in the cost of living. The firm has a policy of multiskilling where each operative must know at least 4 different jobs to advance into the next level. Most training is done on the job, although workers are sent for required courses at the Penang Skills development center. All operatives must demonstrate competency in math and elementary statistics, as well as use of computers before being confirmed in their jobs.

Although the plant has never been the target of a union organizing drive, there is regular labor management communication through a labor-management consultation scheme. The company shares financial information and operates a suggestion scheme, while workers are involved in departmental production decisions. With the move to higher skill based production the male female ratios and the age distribution of the employees have undergone changes. Under the older Fordist production methods, 75% of the employees were female. According to the personnel manager, employment of females was attractive as they tended to leave when they got married. Given the new production systems require more highly skilled workers and the supply of these skills are more highly concentrated amongst males, males now form 50% of the workforce. In addition, the average tenure of workers is increasing along with decreases in

turnover levels which now average 1-3% per month, down from 5% per month. There is a greater emphasis on job security and the valuation of experience and skills under this production system relative to the pre 1985 Fordist production system. The company has made a serious effort over the last five years to increase its subcontracting network, which has been facilitated by the Malaysian Government's promotion of linkages between small subcontractors and the electronics industry. Most of the subcontracted work relate to simple labor intensive operations, and comprise less than 10% of the total value of output of the company. Our interviews with both management workers suggest that both production and human resource management reflect the practices in the electronics industry in Penang, where most of the high skill based electronics operations are located.

Y Televisions: This is a subsidiary unit of a large television manufacturer located in West Malaysia. The unit is responsible for insertion of components into printed circuit boards used in color television sets. This firm initially invested in Malaysia in its low cost export orientation phase to take advantage of generous incentives offered by the government. It exports 75% of its production to international markets in U.S. and Europe. Its decision to automate production was in response to expanding markets and intense competition in the television manufacturing industry that resulted in a decline of TV prices in the mid 1980s. The increasing labor shortages in Malaysia also spurred its decision to computerize. In 1986, the company invested heavily in automatic insertion machines to replace manual insertion of components.

The automated work process is done in the context of a work organization system that is based on teamwork. Workers on the assembly line (young women) serve as machine feeders, servicing the machine with boards and other components. Given that automation has freed up operative time, the operator is also responsible for quality inspection. The team is headed by a graduate computer programmer who gets the initial test run done and then functions as the team leader or supervisor.

All operatives are trained in several different operations, including servicing the insertion machines, inspection, and minor repairs. Some workers with higher educational qualifications, are sent for training in basic computer skills, to operate Macintosh computers that are used to set up the machine. Workers are trained in supervisory and personality development skills. The compensation strategy of the company changed with the introduction of automation. Not only is it the market leader, paying the best wages in the television manufacturing industry in Malaysiaⁱⁱⁱ (Yun 1990), fixed wages form only 60% of the total compensation package, the balance being accounted for by incentives tied to production (measured in terms of machine down time due to

feeding problems, as well as total output, and quality measured by the percentage of rejects in each run.

The firms benefits are also generous but are benchmarked against benefit plans in the industry, which they closely follow. The firm primarily employs young women, and labor turnover is high (6% per annum) as the women stop work after marriage. Of late, the company has changed its recruitment policy to allow the rehiring of older married women on a part time basis. The company is unionized, with a strong local union affiliated to a national industrial union in the electrical industry. Wage increases and negotiations regarding the introduction of new technology is invariably negotiated by national union leaders rather than local union leaders, given the lack of expertise amongst the young women in negotiations. After 1986, three long term contracts have been successfully negotiated without a strike. There is little or no labor-management interaction on a regular basis, and the grievance system is used extremely rarely. Workers suggest that most work related problems are solved at the supervisor level, after the company introduced a pay system for supervisors that was tied to their ability to solve worker grievances. There have been few grievances regarding issues not directly related to work, and no grievances regarding pay and working conditions after 1986.

Flexibility needs are met by overtime. Yun (1990) who has also studied this plant, noted that each employee works roughly four hours of overtime per day. Overtime accounts for up to 30% of workers' earnings per month. The constantly expanding international market has ensured that there have been relatively few economic downturns, which was met by reduced overtime. So far, no worker has been retrenched, and other external flexibility enhancing methods have not been utilized. Company officials tell us that their work organization and payment practices are standard in the industry, where there is considerable bench-marking through the interactions of the personnel management association and local skills development centers.

COMPARATIVE EVALUATIONS

These cases permit comparisons at several different levels. First, differences between ISI and EOI sectors within each economy are discussed. Thereafter, differences and similarities across the two countries are analyzed. The basic differences found in IR/HR practices are listed on Tables 2 and 3.

-Insert Tables 2 and 3 about here-

Within Country Comparisons

The ISI and EOI Sectors in Malaysia

Table 2 suggests several differences in IR/HR practices across the ISI and EOI sectors in Malaysia. As Table 2 indicates, the two diverse firms in the ISI sector, JCC and PHB Bank, are characterized by rigid job classifications, rigid pay systems, simple on the job training methods, profess to have no layoff policies, and meet their flexibility requirements primarily through the use of overtime. Labor management relationships are generally cooperative, and human resource practices tend to reflect rigidity and complacency. Although these two firms are in different sectors exhibit similarities, note that they are in different industrial and economic sectors, use differing technology and work organization methods, and employ different kinds of employees (Blue -collar vs. white collar). Apart from similar approaches to IR/HR practices, the only other critical similarity is that both firms face stable economic environments given the rapidly growing Malaysian economy, and both firms face domestic competition that is not threatening.

In sharp contrast to the ISI sector, the patterns of IR/HR practices in the EOI sector are different. All the firms are export oriented units servicing international markets. Although they are in different industries using different technologies, work organization is largely based on teamwork operations which emphasize multi-skilled workers and flexible compensation arrangements that enhance skill acquisition and development. As Table 3 suggests, these firms tend to make more use of subcontracting arrangements to enhance external flexibility, and some of them use temporary and casual workers and apprentices. Three out of four firms here are non union and have attempted to avoid unionization, while labor management relations in the unionized television firm are collaborative. In Malaysia, clearly, human resource and industrial relations practices in the EOI sector are far more flexible and aggressive than those of the firms in the ISI sector.

The ISI and EOI Sectors in the Philippines

The general differences noted between ISI and EOI sectors in Malaysia are apparent in the Philippines as well, although the EOI sector shows a greater diversity of IR/HR practices than in Malaysia. In the ISI sector, both Interbank and Dutchboy paints evidence some degree of complacency and paternalism in their personnel practices. Both companies are characterized by relatively rigid job classifications with only vertical movement, both firms have on the job training policies with no policy on multiskilling, both have rigid compensation systems that pay above the market, both companies are unionized, have no layoff policies, and respond to external and internal flexibility needs through the use of overtime reduction and automation.

Industrial relations are largely cooperative, and in the case of DutchBoy Paints, even paternalistic.

The firms in the EOI sector evidence different patterns of IR/HR practices from those in the ISI sector, although the patterns are more variegated in the EOI sector. In general however, the emphasis on flexibility in wages, the focus on skills development, and teamwork is evident in these firms (see Table 3). However, as noted, IR/HR practices exhibit more variance in the EOI sector than in the Malaysian case. Uniden's IR/HR policies that reflects its low cost orientation characterized by assembly line operations with Fordist work practices, a rigid compensation system that pays barely above the minimum wage in the Philippines, uses extensive casual and contract labor, does not adopt a multiskilling policy, and adopts union suppression strategies. On the other hand, MOTOROLA is characterized by a work organization that is based on teamwork, extensive multiskilling, flexible wage systems, progressive personnel policies in a nonunion environment, including work sharing and no layoffs in economic downturns. Matsushita's practices are more similar to those of Motorola rather than UNIDEN although Matsushita is unionized. Citibank, with its teamwork emphasis (unique in the Filipino banking industry), compensation systems tied to skill acquisition, the extensive use of subcontracting, and a more conflictual industrial relations system reflects an aggressive approach to IR/HR that are not seen in the banks in the ISI sector.

Across Country Comparisons

Sector and Firm Comparisons

Comparisons across the two countries tend to confirm the pattern of IR/HR policy differences noted within each country. Examination of Tables 2 and 3, suggest the firms in the ISI sectors in both countries, i.e., two banking firms Interbank (Philippines) and PHB Bank (Malaysia) and the two paint companies, Dutch Boy (Philippines) and JCC (Malaysia) evidence similarities in the IR/HR strategies. For instance, in the banking industry, both banks are unionized, have rigid job classifications, simple training systems, and rigid compensation practices. Both banks appear to follow industry level wage practices as a result of industry wide bargaining, although Interbank pays above the market in the Filipino banking industry. In the paint industry, despite vastly different market conditions faced by the two paint manufacturers (Dutchboy is losing market share to competition, while JCC maintains its market share), their IR/HR practices are remarkably similar. Both firms have relatively rigid classifications and compensation systems, simple on the job based training without multiskilling, collaborative union management relations, with generous benefit policies and a no layoff system.

IR/HR practices in the EOI sectors in both countries also evidence similarities. For instance, in case of electronics firms, Matsushita and Motorola in the Philippines evidence similar IR/HR practices to X semiconductor and Y televisions in Malaysia, all of them having team based production systems, compensation linked to skill acquisition, flexible compensation systems, broad based training, and an aggressive attitude towards workplace flexibility through the use of subcontracting and casual labor. Outside of the electronics sector, Mattel tools in Malaysia, and Citibank in the Philippines also evidence active and aggressive human resource management practices, with an emphasis towards highly flexible practices (see Table 2 and 3).

The central differences between IR/HR practices in the ISI and EOI sectors in both countries appear to be found with respect to compensation policies, work organization, multiskilling, internal flexibility arrangements and unionization. The constructs underlying these practices are those of flexibility and productivity enhancement. Firms under an EOI sector appear to place a greater emphasis on flexible human resource practices.

Given that Malaysia and the Philippines are following different EOI strategies, (Malaysia follows an advanced EOI strategy while Philippines follows a simple first stage EOI strategy) it was expected that there would be some differences in the IR/HR patterns in the EOI sector in both countries. This difference is best exemplified in the comparison of IR/HR practices of a Philippine electronics firm, Uniden, with the policies of electronics firms in Malaysia. UNIDEN's policies reflect a low cost orientation, given its low wage strategy, no multi-training, Fordist work organization and conflictual employee relations, while Malaysian electronics firms evidence a higher skill based and more flexible, progressive IR/HR policies. Admittedly, both Motorola and Matsushita in the Philippines also evidence progressive IR/HR policies and are notable exceptions to the argument. However, as noted by Pineda-Ofreneo and Ofreneo 1994) Matsushita and Motorola are exceptions to the standard of electronics manufacturers in the Philippines, given that most Philippine electronics firms are more similar to Uniden.

The difference between Malaysian and Philippine electronics firms found here is consistent with other findings regarding the international division of labor in the Southeast Asian electronics industry, noted by Allen (1990) and others (Lai 1992, Rajah 1993, Salih, Young, and Rajah 1988) who have suggested that firms locate the lowest end of their production such as assembly and testing, in the Philippines, and higher end processes such as wafer fabrication and design of chips in Malaysia. Motorola for instance has three factories in Malaysia and has transferred R&D there as early as 1986, while it has not done so in the Philippines. Matsushita's Malaysian operations dwarf its Philippine operations in scope, and size, with three plants and more investment slated for 1994.

A study by the Board of Investments for the Department of Trade and Industry in the Philippines suggests that Philippine electronics firms typically concentrate on "the assembly, testing and packaging of semi-conductors, representing the most labor intensive stage, and involves nothing more than the cutting of silicon wafers into separate dies and their individual encapsulation using plastic ceramic or metal cans as casing materials" (ESP 2000: 51). The Malaysian electronics industry, which focused on assembly and testing in the early 1980s, is now characterized by higher end processes and final testing, as well as research and development. In a recent study of work organization and human resource practices in the electronics industry in Malaysia, Rajah (1994: 22-24) suggests "work boundaries have expanded--team work and collective responsibility have become more important-- a wider set of skills, including SQC and computer operations are now required-- and wages are higher and tied to skill acquisition".

Clearly, the cases in this paper provide some support to the proposition that IR/HR practices in the Malaysian EOI sector are perhaps more "advanced", but certainly different to the norm in the low cost EOI sector in the Philippines.

Discussion

The argument in this paper was that the dominant industrialization strategies of both countries influences the growth of different patterns of IR/HR policies and practices in economic sectors that are created by the industrialization strategy. The comparisons suggest three conclusions. First, there are differences in IR/HR practices between the ISI and EOI sectors in each country. In the ISI sector, firms appear to be following more "passive" human resource practices. In the EOI sector, in both countries, the human resource practices appear to evidence more diversity, but suggests a general pattern of more "aggressive" and flexible IR/HR practices, that appear to fit the pattern of "new human resource systems" alluded to by many authors. Second, these differences are apparent in both countries. Third, the IR/HR practices under a more advanced EOI strategy in Malaysia differ from the IR/HR practices in first stage EOI in the Philippines, which is best exemplified by the electronics industry, which constitutes the bulk of the EOI sector in both countries.

Although I focus on the industrialization strategy to explain the differing IR/HR practices in the two sectors, there can be other explanation for the differences noted above. One explanation is the role of technology in shaping human resource and industrial relations practices. It can be argued for instance, that work organization in the paint industry cannot be team based since it uses continuous process technology, providing little opportunity for team based production. While this is certainly true, it does not explain the other rigid and paternalistic

practices found in the paint industry and banks in the ISI sector in both countries. In the banking example, note that while both ISI banks had relatively rigid practices, Citibank in the EOI sector pursued a more flexible strategy. The technology based explanation therefore, does not fully explain the patterns noted above. .

A second alternative explanation for the differences between EOI and ISI sectors concerns the differences between domestic and foreign management. The argument is that firms in the EOI sectors are foreign owned, and they transfer IR/HR management practices from abroad to both Malaysia and the Philippines. This explanation is supported by some of the cases. Clearly, in the Philippines, Citibank, Motorola, and Matsushita have introduced in these countries the human resource management practices used in their worldwide operations. Note however, that even domestic paint manufacturers like JCC and Dutch Boy are owned partly by foreign interests, with substantial technological collaboration with a variety of foreign firms. Note also that Interbank in the ISI sector is a subsidiary of American Express. Clearly, foreign managements bring with them their own industrial relations and human resource innovations. However, there is enough evidence in this paper to suggest that there is a generalized pattern of ISI-EOI sector IR/HR differences that cannot be solely explained by the foreign management explanation.

I therefore conclude that the differences in patterns of industrial relations and human resource policies between ISI and EOI sectors in both countries are due to the industrialization strategy that is followed. The pattern of differences appear to mirror the differences in the competitive environment faced by the firms. The simple difference is that firms in the EOI sector have to compete in the international market, and are subject to changes in the global economic environment that is more volatile than the domestic environment that ISI firms face.

These differences are also exacerbated due to the different rules that EOI firms and ISI firms face. For instance, it can be argued that the EOI sector in Malaysia is largely nonunion, given a government policy that until 1988 prohibited unionization in the electronics and export sectors in Malaysia, and even after the ban on unionization was lifted, labor laws that allow employers to pursue union avoidance policies continue to exist. Similarly, government policies in Malaysia have encouraged the development of local subcontractors for the export oriented firms, through the provision of capital and technological assistance as part of its industrial development policy, thus facilitating the extensive use of subcontracting in the EOI sector in Malaysia. In the Philippines, a subcontracting exchange for the EOI sector has recently been adopted (Ofreneo 1994), and as the cases suggest there is extensive use of temporary and casual labor in the EOI sector that is not apparent in the ISI sector in the Philippines.

Since Malaysia is at the stage of advanced EOI based on high skills, while the Philippines is at the stage of simple EOI with cheap labor as the competitive advantage, the incentives under the EOI strategy are structured around these competitive positions, and hence explains why higher technology investment flows into Malaysia relative to the Philippines, resulting in different patterns of IR/HR practices in the EOI sectors.

The findings in this paper suggest that different patterns of workplace level IR/HR practices are found under different industrialization strategies, and is consistent with the finding that industrialization strategies and national level IR/HR practices are closely inter-related (Kuruvilla 1994). The use of the industrialization strategy framework in explaining IR/HR practices permits researchers to go beyond traditional sectoral differences such as manufacturing or services", "blue collar and white collar" to sectors such as ISI and EOI that include both blue and white collar firms as well as manufacturing and service firms. The framework thus provides comparative researchers with a different unit of analysis in examining patterns of IR/HR practices.

However, the relatively small number of cases does not permit easy generalization. A wider range of firms need to be sampled to make that generalization. Future research may wish to address this issue by extending this type of analysis to more firms in both sectors and to other countries in Asia, where the development strategies have been similar. Given the increasingly widespread acceptance of the Asian model as a development model for the third world, opportunities for this kind of investigation abound.

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Table 1 : Outcomes of Industrialization Strategies

Economic Growth Rates^a		
Year	Malaysia	Philippines
1971-75	7.2	5.7
1976-80	8.6	6.0
1981-85	5.2	-1.2
1986-90	6.1	5.1

Contribution of Sectors to GDP (percent)^b						
	Malaysia			Philippines		
	Agriculture	Industry	Services	Agriculture	Industry	Services
1960	33.8	7.2	20.4	27.1	15.2	29
1970	28.8	14.7	22.7	27.0	22.6	32.6
1980	22.9	19.6	22.4	28.8	25.7	26.2
1990	18.7	26.7	22.9	24.6	25.5	30.7

Contribution of Manufacturing to Total Export Earnings 1970-1990 (percent)^c							
Country	1970	1974	1977	1980	1984	1987	1990
Malaysia	7.4	13.6	15.4	19.0	26.7	39.5	3.9
Philippines	7.6	12.9	24.9	36.8	55.1	61.8	61.8

Foreign Firms Share in Manufacturing (percent)^d				
Country	Employment	Fixed Assets	Sales	Exports
Malaysia	49	32	45	60
Philippines	-	32	41	66

Sources:

^a World Bank Tables, 1992

^b World Bank Tables, 1992

^c World Bank Tables, 1992

^d National Statistics, Various Issues

TABLE 2. IR/HR PRACTICES OF FIRMS IN MALAYSIA

IR/HR PRACTICES	ISI Sector		EOI Sector		
	JOTUN PAINTS	PERWIRA HABIB BANK	COMPANY X SEMICONDUCTOR	MATTEL TOOLS	COMPANY Y TELEVISIONS
BUSINESS	Manufacture of paints for domestic market	Domestic banking	Export of electronic components	Export of molds for toys	Export of television components
WORK ORGANIZATION AND TECHNOLOGY	<ul style="list-style-type: none"> - Continuous process technology - Rigid job classifications 	<ul style="list-style-type: none"> - Clerical operations - Rigid job classifications 	<ul style="list-style-type: none"> - Automated assembly line - Team based work systems 	<ul style="list-style-type: none"> - Automated design and manufacture with highly skilled individual processes 	<ul style="list-style-type: none"> - Automated assembly line with horizontal work teams
TRAINING FOR OPERATORS	<ul style="list-style-type: none"> - OJT for job specific skills 	<ul style="list-style-type: none"> - OJT for job specific skills 	<ul style="list-style-type: none"> - OJT - Multiskilling - Teamwork training - Computer training - SQC training 	<ul style="list-style-type: none"> - OJT - Training in maintenance - External training in tool and die-making 	<ul style="list-style-type: none"> - OJT - Multi-skilling - Computer training - SQC training - Personality development
COMPENSATION STRATEGY	<ul style="list-style-type: none"> - Market leader - Rigid system with production bonuses 	<ul style="list-style-type: none"> - Market follower - Industry level wage bargaining - Rigid pay system with guaranteed bonuses 	<ul style="list-style-type: none"> - Market follower - Highly flexible pay tied to productivity and skills development 	<ul style="list-style-type: none"> - Market follower - Highly flexible pay with incentives (Incentives form 40% of total salary) 	<ul style="list-style-type: none"> - Market follower - Flexible Pay - Incentives for skill development
WORKPLACE FLEXIBILITY	<ul style="list-style-type: none"> - No layoff policy - Overtime when necessary 	<ul style="list-style-type: none"> - No layoff policy - No overtime policy - Use of temporary labor in peak periods 	<ul style="list-style-type: none"> - Regular overtime - Extensive use of subcontracting 	<ul style="list-style-type: none"> - Regular overtime - Extensive use of temporary labor - No layoff policy - Subcontracting 	<ul style="list-style-type: none"> - Overtime - Subcontracting
LABOR MANAGEMENT RELATIONS	Cooperative	Cooperative	Nonunion with progressive HR policies	Nonunion with progressive HR policies	Cooperative with progressive HR policies

TABLE 3. IR/HR PRACTICES OF FIRMS IN PHILIPPINES

IR/HR PRACTICES	ISI Sector		EOI Sector			
	DUTCHBOY PAINTS	INTERBANK	CITIBANK	UNIDEN	MOTOROLA	MATSUSHITA
BUSINESS	Manufacture of paints for domestic market	Domestic savings bank	Foreign exchange bank	Export of circuit boards	Export of electronic products	Export of electronic products
WORK ORGANIZATION AND TECHNOLOGY	- Continuous process - Rigid job classifications	- Rigid job classifications	- Flexible job classifications - Group work	- Manual assembly line - Rigid classifications - Fordist work organization	- Fully automated processes - Highly flexible job classifications - Semi and fully autonomous teams	- Semiautomated assembly line - Fixed job classifications with horizontal teams
TRAINING FOR OPERATORS	- OJT for job specific skills - No job rotation or multiskilling policy	- OJT for job specific skills - No job rotation or multiskilling policy	- Job rotation - Multiskilling policy	- OJT for job specific skills. - No multiskilling policy	- Job rotation - External team training - Skills development policy - Incentives for education	- Job rotation - People skills
COMPENSATION STRATEGY	- Market leader - Rigid but generous compensation system	- Market leader - Rigid pay system with guaranteed bonuses	- Market follower - Flexible compensation partly tied to skill acquisition	-Market follower - Compensation system rigid with no incentives - 40% employees paid lower than minimum	- Market leader - Highly flexible pay system tied to skill acquisition	- Market follower - Skill based system with productivity incentives
WORKPLACE FLEXIBILITY	- No layoff policy - Overtime when necessary	- No layoff policy - Increased automation	- Subcontracting - Overtime	- Extensive use of subcontracting and temporary labor	- No layoff policy - Worksharing	- Extensive use of temporary labor, overtime, and subcontracting
LABOR MANAGEMENT RELATIONS	Paternalistic and Cooperative	Cooperative	Conflictual	Nonunion with aggressive union suppression strategies	Nonunion with progressive HR policies	Unionized with cooperative labor-management relations

Endnotes

ⁱ Two well known comparative studies in industrial relations using pair-wise comparisons are that of Dore (1973) who compared Britain and Japan, and the Aixen-Provence group (Maurice, Sellier, and Silvestre 1986) who compare France and Germany.

ⁱⁱ The notion that there is a clearly defined development pathway in Asia is not new. Deyo (1989) alludes to the similarity of the export oriented economies of Korea, Taiwan, Hong Kong, and Singapore. Kuruvilla (1994) suggests the similarity of export oriented strategies in several Asian countries including the acceptance of this strategy in emerging nations such as Cambodia, Laos and Vietnam. More systematic comparisons of export oriented policies and incentives (see Limequo et al) and similarities in economic transformations (see Kuruvilla and Pagnucco 1994) also strongly suggest the presence of a typical development model.

ⁱⁱⁱ This company has also been studied rather exclusively by Yun (1990), and this case study draws extensively from her work.