
GLOBAL ELECTRONICS

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HIGH TECH JOBS

In a brief, cogent report on the "Educational Implications of High Technology," Stanford University education researchers Henry Levin and Russell Rumberger have challenged the oft-heard assertion that the growth of high technology industry is creating a huge demand for technically trained workers and professionals. Using figures from the Bureau of Labor Statistics, they argue, "Although employment in high technology occupations will increase quickly in percentage terms over this decade, the contribution of these jobs to total employment growth will be quite small." Measured by the total number of jobs likely to be created, as opposed to percentage increase, the five fastest growing occupations in the U.S., 1978-1990, are janitors and sextons; nurses' aides and orderlies; sales clerks; cashiers; and waiters/waitresses.

Levin and Rumberger endorse the notion that high technology is likely to increase the division of labor in the workplace. They conclude, "Past applications of technology in the workplace as well as present evidence suggest that future technologies will further simplify and routinize work tasks and reduce opportunities for worker individuality and judgment. Moreover, the displacement in jobs and the downgrading of skill requirements for most of the new positions will undermine employ-

ment generally, and especially the employment of skilled workers."

Rumberger and Levin assess the educational implications of high technology: "[A] solid basic education rather than narrow vocational preparation will become more important in the future." They summarize, "[The] educational system should strengthen the analytical and communicative skills of students, not because of the needs of high technology, but because such skills will help them deal with the changing political, economic, social, and cultural institutions they will face in their adult lives." (Institute for Research on Educational Finance and Governance, School of Education, Stanford University, Project Report 83-A4, February, 1983)

BRAZIL WAFERS

Heliodinamica, a Brazilian firm formed in 1980, plans to meet all of Brazil's demand for photovoltaic silicon wafers by 1984. The only grower of silicon ingots in Latin America, it expects to export in volume as well. **Electronics** (February 24, 1983) reports that the company may soon produce wafers for the lower end of the integrated circuit production market. The Brazilian government is considering the development of an industrial park near the University of Campinas, in Sao Paulo state, which might include a Heliodinamica silicon plant.

EL SALVADOR

Only one U.S. semiconductor firm, Texas Instruments (TI), operates an assembly plant in civil war-torn El Salvador. Until a few years ago, TI employed 500 workers at Soyapango. When that plant closed, the company retained its factory at Ilopango, which currently has about 1,000 workers.

As in other countries, ninety percent of the workers are women. All supervisors are men. All top managers, engineers, and trainers are from the U.S. Reports the **People's World** (March 26, 1983), "In 1980 the average wage for production workers was \$4 a day." Union workers in other industries earned \$6 a day. At such low pay, many TI workers live in cardboard houses. In desperate need for work, some have reportedly been forced to sleep with supervisors.

In 1975 workers at Soyapango formed a union. TI, which is non-union throughout the world, refused to recognize it. The union grew despite repression by company security forces, and in March, 1980 workers participated in a general strike. The company fired 40 workers, and troops shot two sympathetic workers from a neighboring plant. Since then, government troops have bombed every office of the electronics workers' union and killed or driven into exile its leaders, virtually destroying the union.

For more information about the labor situation in El Salvador, contact the **Comite de Sindicalistas Salvadorenos en el Exilio**, Box 5533, Los Angeles, CA, 90055.

MALAYSIA

Late last December, Texas Instruments laid off 130 workers from its plant at Ulu Klang, near Kuala Lumpur, Malaysia. Workers were retrenched without notice, but they received severance pay based upon their terms of employment. **The Star** (December 27, 1982)

reported that TI had plans to lay off an additional 600 workers early in 1983. It said machinery was being shipped to a TI plant in Taiwan, and that the Ulu Klang plant was being computerized.

In January, Litronix offered any of its 1,100 workers in Penang full termination benefits if they would voluntarily resign. When approximately 150 workers quit, the company discouraged further resignations. Litronix had been on a four-day week since August, 1982 because of the recession. In January, following the resignations, a company spokesman said Litronix would resume its full schedule soon. **The Star** (January 14, 1983) reported that some workers regretted having resigned. It cites one 22 year-old woman, "We feared we would be kicked out sooner or later and grabbed this offer."

Meanwhile, the Malaysian government has finally taken steps toward the recognition of an electronics workers' union, after ruling earlier that they could not join the Electrical Industry Workers Union because it represented workers in a different industry. In January, Labour and Manpower Minister Datuk Mak Hon Kam announced sanction for an electronics union if workers wanted it.

Workers from several plants immediately began to set up an organizing committee, with the help of EIWU officials. The EIWU reportedly represents 6,500 workers. The electronics industry in Malaysia, primarily integrated circuit assembly for U.S. firms, employs some 60,000 workers.

Dan Nelson, managing director of Hewlett-Packard's Penang factory, told the **Star** (January 4, 1983), "It is hard to imagine what the union can offer or contribute to the employees." H-P, one of the largest employers in Silicon Valley, is considered in the U.S. to be strongly anti-union, but paternalistic toward its employees. Following Nelson's statement, the Penang Trade Union Congress challenged Nelson to a debate.

INDIAN WATCHES

Semi-Conductor Complex Ltd. (SCL), a project of the Indian government's Department of Electronics, has begun production of digital electronic watch (DEW) modules by assembling components imported in semi-knocked-down condition from Hitachi of Japan. Eventually, SCL will manufacture six types of modules in collaboration with Hitachi at SCL's complex near Chandigarh, in North India. The factory, which started operations early in February, plans to assemble 100,000 modules of two types in the Indian fiscal year commencing next April.

Under the government's 1980 policy for electronic watches, SCL has been designated the sole source of DEW modules for approved watch manufacturers. These supplies will be provided initially through imports, but domestic manufacture will be phased in.

SCL has been providing technical assistance to watch manufacturers, under the Department of Electronics' program to reduce substantially the import content of locally assembled DEW's in the next few years. At present, imported components account for about half the total cost of a watch. Thirteen public-sector corporations and twenty-two small-scale private manufacturers have been approved to produce watches.

Under import-substitution measures instituted in the last two years, a private firm has launched production of digital watches. The state-owned Hindustan Machine Tools, Ltd., is also planning manufacture.

#03 Punjab Display Devices, Ltd., an undertaking of the Punjab state government, proposes to make liquid crystal display panels for DEW's in collaboration with Hitachi. SCL and the Department of Electronics are assisting two public-sector companies, Bharat Electronics and Kerala State Electronics Development Corporation, to produce crystals.

PHILIPS

Philips, the Netherlands-based electronics giant that is the world's third largest private employer, has been re-organizing its global division of labor over the past decade. Not only does its Silicon Valley chip-making subsidiary Signetics have plants in the Third World, but in the past several years Philips' European workforce has been reduced by 100,000. Much of the work has been shifted to the Third World.

To monitor and influence the impact of company strategy on its workforce, the Research Unit Industrial Branch Electrotechnics (SOBE) organized an international conference of Philips employees at Eindhoven, Holland, in June 1982. Workers at that conference initiated the **Philips Workers News**, edited by SOBE. Available in English, sample copies of **Philips Workers News** can be ordered from SOBE, Kruisstraat 82, 5612 CK Eindhoven, NETHERLANDS.

SOBE has also published an English-language book, **Philips: International Re-Organizations and Workers' Resistance**, analyzing the worldwide electronics industry and Philips' position in it.

MABUCHI GASSING

In Hong Kong, over a two-week period in late January and early February, one male and 195 female workers sought hospital treatment following exposure to ozone gas at Mabuchi Industries, a Japanese-owned electronics firm. Reportedly, the gas was released during a new production process, in which ultraviolet lights were used to dry epoxy resins without adequate ventilation.

Although most of the workers have returned to work, one of thirteen exposed pregnant women lost her fetus within a month. The Hong Kong press called for tighter controls over hazardous substances in the workplace, and at least two victims have gone to court for legal compensation.

OPIC

The U.S. government's Overseas Private Investment Corporation, which insures the foreign direct investments of U.S.-based companies against currency inconvertibility, expropriation, and war, revolution, and insurrection, continues to back offshore electronics production. In 1982 it wrote a \$8,856,450 policy for American Microsystems' integrated circuit assembly plant in the Philippines. It backed Applied Magnetics' magnetic recording head facility in South Korea with a \$1,620,000 coverage. And it insured RCA's Taiwan facilities for \$19,000,800 for IC and miniature television assembly and \$38,084,346 for the expansion of an electronics component plant. (OPIC 1982 Annual Report)

ASIAN LABOUR MONITOR

The Hong-Kong based Asia Monitor Resource Center (2 Man Wan Rd., 17-C, Kowloon, Hong Kong) has announced plans to publish, beginning October, 1983, the periodical **Asian Labour Monitor**. The **Monitor**, which will be cross-referenced and indexed, will carry news of working conditions and labor action in the Asian region. The publication will be organized along the lines of the Center's other periodical, **Asia Monitor**, which reports on capital movements in the region. It will contain industry reports, country reports, and a resources section.

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