A License to Build (Software)

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Despite working in a global job market, software engineers must surmount local problems.

Conference hotels look remarkably similar around the world. This similarity can lead you to believe you understand a problem when you don’t. I fell into this trap while trying to answer a question about my opinion on the Malaysian government’s proposal to license software engineers. After a pause, I gave a pat speech about risk control. I ran through the standard arguments and talked about the public nature of engineering, the risks borne by communities, the rights of communities to mitigate those risks, and finally, how the software industry has chosen a different strategy to address risk. My words were politely received but were followed by a moment of silence long enough to remind everyone in the room that computer scientists work in a global industry that has to deal with local problems.

The licensing proposal came as the Malaysian government was preparing a new five-year economic plan. Unlike the economic plans of the old Soviet Union or those once common in India, the 2016–2020 Malaysian economic plan is closer to a corporate strategic plan. It articulates goals, identifies infrastructure investments, catalogs best practices, and outlines policy changes. It’s an aggressive document with subtle references to the successes of India and China, two countries that serve as both models and competitors for Malaysia.

This proposal was originally part of a plan to expand Malaysia’s technology workforce—which had already doubled in the prior five years—by about 30 percent between 2016 and 2020. The policymakers, or at least some of them, reasoned that requiring licensure would make software engineering jobs more prestigious. They imagined hundreds if not thousands of young workers would flock to the field, similar to the structural engineers who built the famous Petronas Towers in Kuala Lumpur.

Time and again, software developers report that they don’t have the same status afforded to product managers or financial managers. So anyone who has spent time in the software field knows that there’s a desperate truth behind the Malaysian reasoning, though it might not be enough to achieve the desired results. Indeed, a license might elevate a software developer’s status, but it could just as easily burden the job with additional costs that would discourage people from entering the field.

In passing judgment on this proposal, I needed to move from theory to practice, from speculative reasoning to cold, hard facts. The facts came in the form of Information Technology Professional Examination Council (ITPEC) certificates. These certificates aren’t licenses, but they were developed in the mid-1990s (as the software outsourcing market began to grow) to give programmers access to the Japanese software market. Run by a Japanese nonprofit, the certificate programs are offered in Malaysia, Vietnam, Mongolia, Thailand, Myanmar, the Philippines, and Bangladesh, but they’ve never been popular. Over 20 years, they’ve brought about 3,500 programmers to Japanese firms. Less than five came from Malaysia.

By the time the final document was published, the Malaysian government had abandoned its plan to license software developers. As the idea passed from office to office and meeting room to meeting room, policymakers recognized that it could actually incentivize people to look for jobs in other fields. However, the government still needed a plan to expand the software-developer workforce, so it embraced a set of ideas that have been discussed in almost every meeting room in the world. They decided to promote early STEM education, build more technology incubators, fund nonstandard training programs, and encourage more joint programs between business and education.

To connect their technical workforce with those of North America and Europe, the government also proposed a Malaysian professional body that would govern professional competencies and ethics within the country but strive to ensure that “professionals’ competencies are on par with global standards.” It wouldn’t be a radically new kind of organization; instead, it would be the kind that could be created in the meeting rooms of a large conference hotel.

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