Components of IT Business and Value Addition

IT industry can be seen as an amalgamation of different business components. Sometimes they are standalone business units. But often by mixing and matching they become a formidable compound business offering. The following table 1 shows the architecture of IT business, the components and the bouquets of IT industry offerings.

Table 1 Components of IT Business and Value Addition

No	Components of IT business	bouquets of offerings	Relative value add position
1	Hardware manufacture	Hardware(H/W) + Operating System(O/S)	Bottom of the pyramid
2	Systems Software	O/S, Sort, RDBMS, Networking (N/W) O/S with cards etc.,	Good value as once-produced, are used on every computer
3	Application Software	Applications like Pay Roll, Custom developed Software like inventory etc.,	Medium value add, Needs marketing push
4	Systems Integration	H/W + S/W + N/W + Custom developed Application	High Value add, Needs domain expertise. Examples: Reservation Systems, Banking Systems Etc.,
5	Software Products	Pure software, like MS Office suite, SAP, SPSS etc.,	Higher value add, needs innovation and marketing
6	Consultancy	Transformational and innovative business growth drivers.	Extreme value add, Drives all the above businesses. Needs deep knowledge, experience and insights.

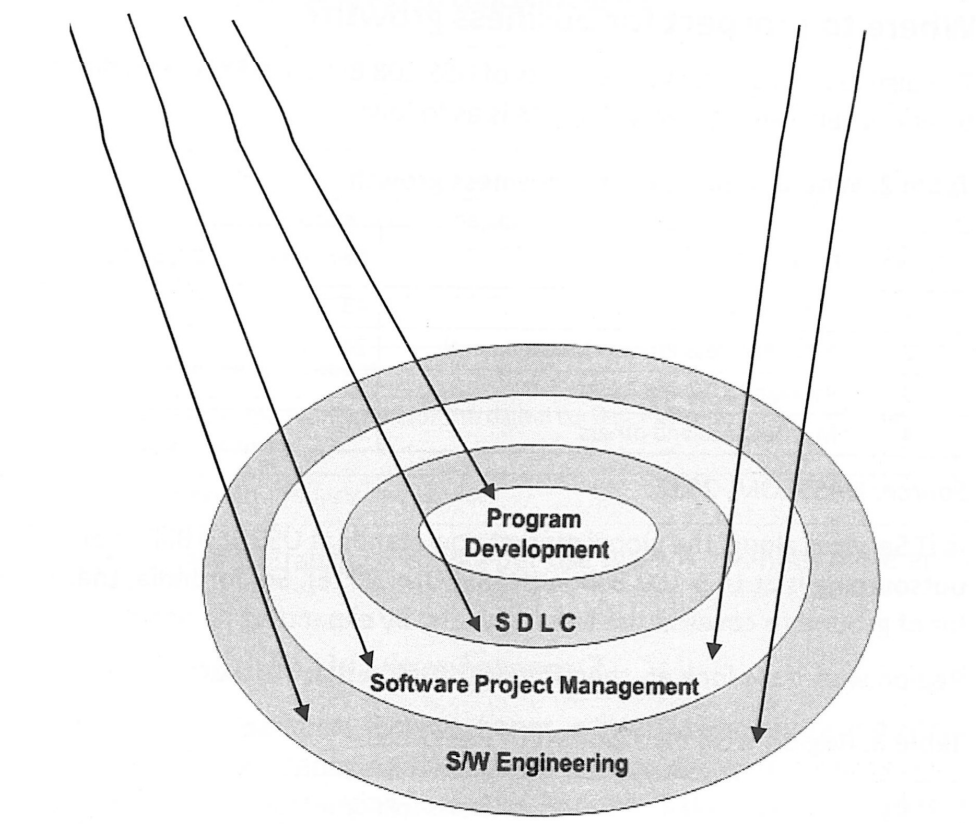
Where is our IT industry vis a vis the above table now? And in which areas our companies are strong? In which geographical markets they should concentrate their efforts?

Before we can attempt to answer these questions, we have to examine the software exports scenario and the business delivery models thereof, as they emerged over the years.

'Software Exports' Business Model and how work will shift now Onsite-Offshore and Offshore Development Centre (ODC) based delivery model:

The schematic figure below depicts the model generally adopted by software industry.

Figure 1. Onsite-Offshore and Offshore Development Centre (ODC) based Delivery Model



The customer-interfacing work of Requirements gathering, Architecting the solution, and High-Level Design as part of Software engineering effort, are done at customer premises, generally abroad. The resources used are costly and time spent is less as a percent of the project life-time. Even now in the changed scenario, this will continue as before, albeit the human resources become costlier and perhaps project costs and timelines go up.

Almost 50 percent of the work earlier done from India was in the other three effort areas viz., Software Project Management (SPM), System Development Life Cycle (SDLC) and Programming activities. Major portions of these activities will now have to be shifted abroad due to new protectionist business scenario. This means down-sizing to some extent in Indian human resources and consequent upsizing of resources abroad. This will put high pressure on margins. This also can affect employment prospects in India at

4. Small niche firms doing good work in new technologies will prosper and grow.
5. There is going to be increasingly reduced deputation of software engineers either on short or medium-term basis in view of the H1-B salary criterion as per the revised policy. Purely, from a P& L point of view, this will have a negative bias on the margins.
6. Social Media, Big data, Big Analytics and AI are some of the areas that the Fortune 1000 companies are proposing to invest into, as part of their discretionary IT spending. Indian IT companies need to build deep competencies in these areas.
7. Indian market has become quite attractive in view of some of the programs such as 'Digital India', 'Make in India', and 'Smart Cities'. There is likely to be greater push into Indian market by Indian IT companies.

Conclusion

Over the next 5 to 10 years, Indian IT companies will be challenged with increased protectionist pressures, reduced margins and increasingly complex IT requirements. This will translate into developing diverse skill sets by a typical software engineer. It is to be seen if the 'demographic dividend' will accrue to India or will it be a challenge for the industry and the country.

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